IMPRESSION III

The document processor for the Archimedes

Computer Concepts Ltd

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Publisher Upgrade

SERIAL NUMBER 211346.

User Manual

Computer Concepts Ltd

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About this manual

This manual describes the Impression Publisher software package. It is divided into the following sections:

1. **Introduction**

   Basic information about Impression.

2. **Using Impression**

   Describes the features available in Impression.

3. **Keyboard short cuts**

   A list of short cuts available from the keyboard, grouped by function.

Appendices

1. Updating ABI – this describes what action to take if you need to update the copy of ABI (the user interface controller) on your computer.
2. Details of how to use the dialogue boxes in Impression. Valuable information if you are new to Acorn computers.
3. Recommended equipment - our suggestions on useful hardware.
4. Hints and tips - things that we've found helpful when using Impression.
5. Complete lists of the standard character set and the Greek and Dingbats fonts. Plus short samples of the available text fonts.
6. Borders - all the standard and optional borders illustrated.
7. Further information on using different types of printer with Impression and using the draft printing facility.
8. Details of the loaders provided by Impression for importing text files from other applications or computers.

Typographic conventions

This section describes the conventions used in this manual.

Menu options

Where you can choose an option from a menu, the name of the option is shown like this: *File ⇒ Save document.* This means first display the *File* menu then choose *Save document.*

Dialogue box switches

These are shown as *OK.*

Keyboard characters

Where you use the keyboard for control, the name of the key is shown in italics.

Return means the key marked '*Return*'

Space means the Space bar

F1 to *F12* means the function keys along the top of the keyboard

Ctrl-A means hold down the *Ctrl* key and then press *A* or *a*

Shift-A means hold down the *Shift* key and then press *A* or *a*

Ctrl-Shift-A means hold down both the *Ctrl* and *Shift* keys and then press *A* or *a*

Mouse buttons

We use the Acorn convention for the three mouse buttons:

the left-hand button is called **Select**,

the centre button is called **Menu**,

the right-hand button is called **Adjust**.

Where we say click on something and don't specify a mouse button, use **Select**.

Chapter 1: Introduction

Where word-processing and desktop publishing meet

The microcomputer has brought the way we record our thoughts and ideas on paper firmly into the modern-day domain of wordprocessors and, more recently, desktop publishing (DTP) systems.

A desktop micro running a word-processing program, in conjunction with a suitable printer, is nothing more than a computerised typewriter. A DTP package, on the other hand, takes the textual output of a word processor and lets you arrange it on a page virtually as you wish, complemented by illustrations made from scanned images, diagrams, etc., with the facility to resize everything, including pictures, in order to fit the page precisely.

Then, with the aid of the latest hardcopy technology, your work can be reproduced, as you see it on screen, using dot-matrix printers, laser printers, or even professional type-setting machines.

Now, using the sheer power that Acorn RISC OS computers has brought to personal computing, the concepts of word processor and DTP have been completely and successfully married to produce Impression.

As an example, this manual was written and laid out entirely using Impression on an Acorn computer. It was printed out on a Computer Concepts' LaserDirect printer, and photographically reduced for printing.

A complete document processor

Impression is a powerful word processor and a fully featured, extremely fast, DTP package - a comprehensive document processor.

With Impression you can write letters, booklets, business reports, design advertising copy and posters. Pages can be laid out precisely on screen whilst retaining all the advantages of a true word processor, such as text editing with crisp cursor responses and spell-checking as you type, word counting, search and replace, cut and paste, and more.

Text and illustrations can all be imported into Impression documents, and the Acorn computer windowing system is exploited to the full.

Impression is entirely written in hand-optimised ARM (Acorn RISC Machine) code, which means it can update the screen extremely fast. It is possible to zoom in or out to any scale from 1 to 975%, either to magnify a portion of your document for detailed study, or to zoom out for a stepped back view of one, two, or many more pages on screen at once.

Impression uses the RISC OS outline fonts to ensure that the representation of the page on the screen is as accurate as possible. Even large characters are shown smoothly, and smaller text is displayed using anti-aliasing, a technique intended to make small text more readable by 'smudging' the edges.

And of course everything you see on the screen will be a true representation of what is printed out; in other words, true *What You See Is What You Get* (WYSIWYG).

Desktop publishing is a very wide-ranging discipline. Whilst Impression gives you all the tools necessary to produce remarkable documents, making the fullest use of the technology requires a certain amount of experience. You will probably find it useful to read one of the many books available on the subject.

Chapter 2: Using Impression

2.1 The basics

This section covers:

- loading Impression
- starting a new document
- loading an existing document
- the Impression window
- the menus
- opening a second window
- closing the editing window
- the clipboard
- scaling your view
- saving the document
- memory management
- quitting Impression

Related section of this manual:

- *2.2 The Toolbar*

Loading Impression

Double-click on the *!Publisher* icon to load Impression.

Impression and networks

A special version of Impression is available which works over a network. This version does not require a hardware key but must be connected to an active network before it can run.

In general there is nothing special to note about networking Impression except:

- With slow networks (such as those using old Econet hardware), it is not advisable to transfer large amounts of data over the network. If Impression is running on several machines, each editing large documents then the network will be heavily loaded. This means slow response times.
- **If you have RISC OS 2** – if *!Fonts* is on an Econet network you may get *Too many files open* or similar errors. This is a problem with the network software and not with Impression. To cure it, you need the latest version of the modules associated with Econet. You can find these on the RISC OS extras disc, available from Acorn.

Starting a new document

Click on the Impression icon on the icon bar. This creates a new document and opens a window onto it.

The new document is a copy of the *default document*, which is a normal document held inside Impression. You can edit the default document, if required, to customise Impression for your precise requirements. For details see *2.16 Customising Impression*.

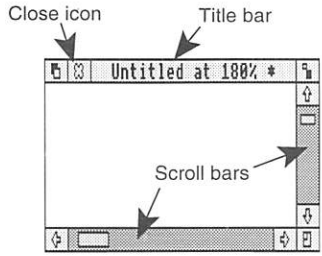
Loading an existing document

You can:

- double-click on the document's icon in a directory window. (This also loads Impression if you have not already loaded it.)
- Drop the document's icon onto the Impression icon on the icon bar.

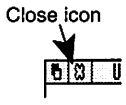
The Impression window

This looks like most other RISC OS windows:



One window will have a yellow Title Bar. This is the *current document*. Any typing or other operations apply to this window.

The *Close* icon



If you have more than one window open on the document (see below), clicking on the Close icon closes that window.

If you have only one window open onto the document, the Close icon can work in two ways:

- Clicking on it closes the window and removes the document from memory. (This is how the Close icon works in most applications.)

  If you have changed the document but not saved those changes, an Alert box warns you. You then have the choice of:

  - discarding the changes,
  - cancelling the close,
  - hiding the document (that is, closing the window but retaining the document in memory) or
  - saving then removing the document.

- Clicking on it closes the window but the document remains in memory. To re-open the document, use the Icon Bar Menu option *New view*.

  The exception is when you create a new document and then close the window without making any changes. Clicking on the Close icon always removes a blank document from memory.

The *Remove document on close* option in *Preferences* on the Icon Bar Menu (described in *2.16 Customising Impression*) controls how the Close icon operates.

Removing the document from memory is described below.

Adjust-clicking on the Close icon closes the window and opens a directory window onto the document's parent directory.

The Title bar

The title bar may look like this

where

FileName is the name of the document.

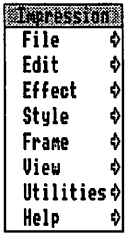
2 shows that this is the second window currently open on the document. (The original window has a space in this position and not 1.)

at 100% is the current scaling of the window (full size).

***** shows that you have made changes but not yet saved them.

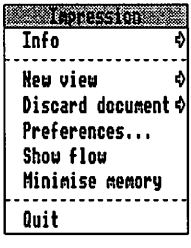
The menus

The Main Menu



To display this, click **Menu** on the Impression window. Most menu options are selected from the Main Menu.

The Icon Bar Menu



Click **Menu** on the Impression icon on the icon bar.

Cursors and pointers

Impression uses two vertical bar-cursors:

- the *text cursor* which responds to normal cursor controls such as arrow-keys or *Return*.
- the mouse pointer which is controlled by the mouse.

Impression tries to keep the area of text immediately around the text cursor constantly visible in the editing window. Even if you scroll the cursor out of the window, typing causes the window to display the area around the cursor. If you use the arrow keys to move the text cursor up or down your document, the window scrolls automatically to keep the cursor in sight.

The text cursor normally blinks to make it more noticeable. You can make the cursor non-blinking using *Flashing cursor* in *Preferences* in the Icon Bar Menu (see *2.16 Customising Impression* for details).

The shape of the mouse pointer changes depending on the part of the document it is displayed over. This indicates the action you can perform.

Scrolling the document

There are several ways to move the document around in the window:

- Use the scroll bars and arrows as normal; these are described in the Acorn *User Guide*.
- Press and hold down the *Ctrl* and *Shift* keys. The arrow keys on the keyboard then act like the scroll arrows on the window. Using *Ctrl-Shift-arrows* does not move the cursor, only the area of the document in the window.
-
When the mouse pointer is over an unused area of the document it changes shape to a hand. Press and hold down **Select** or **Adjust** and you can slide the document.

The *PageUp* and *PageDown* keys scroll up or down by one screen.

Opening a second window

You can have up to four windows open on the same document. Each window or view is totally independent of the others. Any window can view any part of the document and be scrolled freely. Each window can be scaled individually using *View ⇒ Scale view* while the pointer is over the required window.

To open a new view:

- Choose *View ⇒ New view* on the Main Menu or press *Ctrl-Shift-F1* to open a new window onto the current document.
- Choose *New view* on the Icon Bar Menu. This displays a list of documents currently in memory. Choose a document name to open a new window onto that document.

Removing the document from memory

Either:

- use *File ⇒ Discard document* (keyboard short cut *Ctrl-F2*),
- use the *Discard document* submenu on the Icon Bar Menu (this lets you discard any document currently in memory), or, if the *Remove document on closing* option is set in the Icon Bar Menu *Preferences*,
- close all the windows on the document.

You are warned if the document includes unsaved changes. You can then save the document before it is discarded.

Scaling your view

The initial view of the window is 100% (full size). It's often useful to enlarge your view of the document to examine details or reduce your view to get an overall impression. Scalings over

100% show an enlarged view; below 100% a reduced view. All you change is your view of the document. The size of the document and the objects in it are unchanged.

The size of your monitor screen, the screen mode and vertical and horizontal adjustments on your monitor can distort the dimensions of the document on screen. This means that a document displayed at 100% is unlikely to be at its true size.

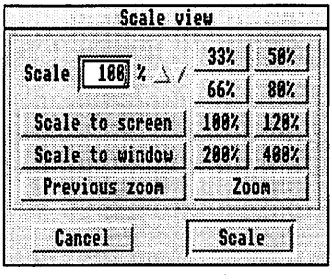
Some screen modes (such as 12 or 20) cannot display the full width of an A4 page. You need a scaling of about 90% to see the full width.

You can either use the *Scale view* dialogue box or the *Zoom* tool.

Scale view dialogue box

To display the *Scale view* dialogue box choose:

- *View* ⇒ *Scale view* or
- *Ctrl-F9* or
- **Select**-clicking on the *Scale* tool.



Change the scaling by:

- clicking on one of the preset boxes. Click on *Scale* to make the change.
- entering a value between 1% and 975% into the edit field. Click on *Scale* to make the change.
- for small changes, clicking on the bump icons to the right of the edit field. Click on *Scale* to make the change.
- clicking on *Scale to screen*. This selects the best scaling to fit a complete page (or pair of pages) on the screen.

- clicking on *Scale to window*. This selects the best scaling to fit a complete page (or pair of pages) in the window.
- clicking on *Previous zoom*. This cancels any previously applied zoom. (**Adjust**-clicking on the *Scale* tool on the Toolbar has the same effect.)
- clicking on *Zoom*. This duplicates selecting the *Zoom* tool from the keyboard.

There are also keyboard short cuts:

- *Shift-Fkey* lets you scale between 20% (*Shift-F2*) and 100% (*Shift-F10*). *Shift-F3* to *Shift-F9* give you the intermediate 10% steps (30% to 90%).
- *Shift-F11* halves the current scaling (say from 150% to 75%).
- *Ctrl-Shift-F11* doubles the current scale (say from 60% to 120%).

For large changes in scaling it is usually quicker to use the dialogue box rather than repeated use of *Shift-F11* or *Ctrl-Shift-F11*. This is because each step caches the fonts for the new scale.

The Zoom tool from the keyboard

Hold down the *Ctrl* and *Shift* keys. The mouse pointer changes shape to a magnifying glass. You can now:

- Click **Select**. This doubles the current scale (this is the same as pressing *Ctrl-Shift-F11*). The enlarged view is centred on where you clicked.
- Click **Adjust**. This halves the current scale (this is the same as pressing *Shift-F11*).
- Press and hold down **Select**. Dragging the mouse draws a rectangle. When you release **Select**, the area within the rectangle is enlarged to fit the window.

Saving documents

Impression can store documents in either of two formats:

- as a single file, or
- as a directory. (With either option you see a single icon in a directory window.)

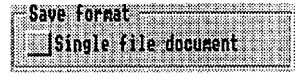
Single file format has these advantages:

- Files are smaller. This is useful for short documents such as letters.
- Directory windows show the file size. (You must use *Count* on the filer menu to find out the size of a directory.)
- File names can be ten characters long; directory names are nine characters plus a leading *!*.
- You can print a single file document by dragging its icon onto the printer icon on the icon bar.

It has this disadvantage:

- It is unsuitable for large documents. Impression loads the entire single file document into memory. With documents saved as a directory, Impression can load just part of a document. (The part being worked on.) This means that documents saved as a directory can be much larger than the memory in your computer.

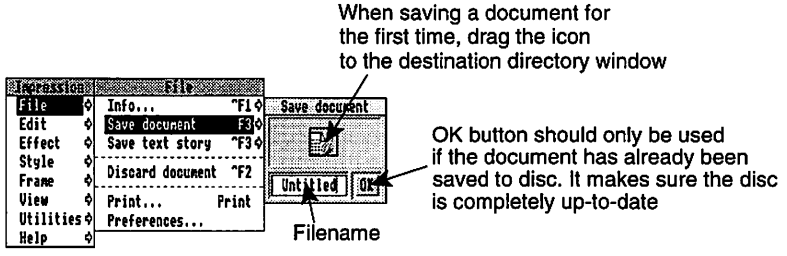
Single file document in *File ⇒ Preferences* selects the save format. *Ctrl-Shift-F3* toggles between the two formats.



You can save a document in either format and change between formats. (Unless the document is too large to be saved as a single file.)

If you want to change the default save format, you can edit the default document. This is described in *2.16 Customising Impression*.

The single file format used by Impression Publisher is incompatible with similar, older formats used in Impression II and Advance. Files saved in the new format cannot be read by Impression II or Advance. (Impression Publisher can read these older format files.)



Saving a document

On floppy-disc systems, if the current document is on one disc and the document is being saved to another, you may be prompted to swop floppy discs.

Saving a document for the first time or Saving to a different filename

Display the save box using:

- *File ⇒ Save Document* or
- *F3* or
- the *Save* tool.

Type in a suitable filename and then drag the Impression icon to a directory window.

Saving a document either to a different directory or with a different name generates a new document on disc and is much slower than saving to the same filename.

To backup a document you save the document to the current filename (which becomes the backup) and then save the document again using a new name (which becomes the current document). If you number your files (such as

Manual1, *Manual2*, *Manual3* etc.) you will find it easy to keep track of the backups. We cannot stress too strongly that you should always make ample backups. Even if you have a hard-disc, you should regularly save documents to floppy discs for security. Similarly, on a floppy disc system, you should use several different floppy discs for storage. Modern discs are reliable but failures do occur. Remember that an Impression document can represent many hours of typing and layout work.

Subsequent saves

The easiest ways are to click on the *Save document* menu option or type *F3-Return*.

You can also display the save box (see above) and click on *OK*.

Impression only saves the information that has changed since the last save.

Saving stories & graphics

For information on text and selected text see *2.3 Text handling*
For information on graphics see *2.9 Graphics handling*.

Use

- *File ⇒ Save text/graphics/selected* or
- *Ctrl-F3* or
- **Adjust**-click on the *Save* tool.

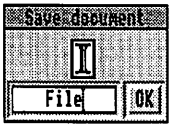
The menu option reads:

Save graphics if you have clicked in a graphics frame,

Save text story if you have clicked in a text frame and there is no selected region, or

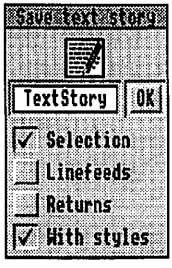
Save selected text if there is a selected text region.

Save graphics



Sprites are saved as *Draw* files; other types of graphic are saved in the same format used to import them into Impression (*Draw, ArtWorks, Equasor* etc.).

Save text story /Save selected text



The *Selection* button is greyed unless there is a selected region of text. It allows you to save either the current text story or just the selected region.

Selecting *Linefeeds* saves the text with a Line feed (code 10) at the end of each line.

Selecting *Returns* saves the text with a Return (code 13) at the end of each line.

Selecting both *Linefeeds* and *Returns* saves the text with *Return* and *Linefeed* on the end of every line.

If neither button is pressed, then the text is saved with only those *Return* characters that you specifically typed in. This is probably the most useful option for saving plain text into another word processor.

If *With styles* is selected then any effects and styles used in the text are output as a special ASCII control sequence. This allows you to incorporate the text into Impression in the future and all styles and effects will still be present.

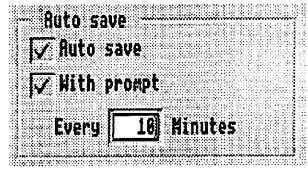
- If text is going to be re-loaded into ***Impression***, then select only *With styles*.
- If text is going to be used in a text editor such as ***Edit*** or ***Twin***, then it is usually preferable to select only *Linefeeds*.
- If text is going to be used for sending to an ***electronic mail system***, then select only *Returns*.

Impression remembers the filename so that subsequent saves can be performed simply by clicking the *OK* button in the dialogue box – it is not necessary to drag the file icon.

The *Save text* option supports in-memory transfer, so you can drop the file icon onto another program's window to transfer the text directly to the other program.

Auto-saving

Auto-save lets you automatically save an edited document to disc at regular intervals. (This is a big help in ensuring that the disc file is kept fully up-to-date.) *File ⇒ Preferences* displays the dialogue box that controls auto-saving:



The operation can be entirely automatic or an Alert box can pop-up to prompt you when it's time to save the document. (You are always prompted the first time the document is saved after loading,) The time interval is user-defined between ***1*** and ***99*** minutes. Auto-saving only saves if there has been a change made to the document.

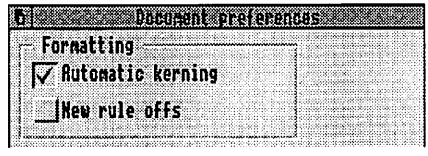
After the time interval has elapsed, Impression waits until the computer is inactive (nothing has happened for 3 seconds) and then auto-saves. (This ensures that you won't get interrupted in the middle of typing.)

If you have *With prompt* set, saving is not automatic; at each time interval an Alert box prompts you. Click on *OK* of the Alert box to save the file. With this option you can postpone the save. (Useful if you are in the middle of an edit.)

Each document has its own set of auto-save settings. This allows different documents to have auto-save enabled or disabled and to have different time intervals. The settings are stored with the document and used whenever that document is loaded into memory.

Loading documents from Impression II & Impression Junior

(These are earlier versions of Impression Publisher.) You can load documents created in these applications. Loading does not alter the document – it appears on screen exactly as it does in Impression II or Impression Junior. However, editing the document converts it to Impression Publisher format and its appearance may change. The *File ⇒ Preferences* dialogue box gives you extra controls for such documents:



Impression Publisher can make use of the auto-kerning tables in some RISC OS 3 fonts. (These tables adjust the spacing between letter pairs.) *Automatic kerning* gives you control over whether to use auto-kerning tables.

This switch is automatically set to ***off*** when loading documents created using older versions of Impression to ensure their appearance is unchanged.

Similarly, the operation of rule-offs has changed slightly from older versions of Impression. Rule-offs in older documents could change if *New rule offs* is ***on***. (*2.6 Styles* has more information on kerning and rule-offs.)

Loading Advance documents

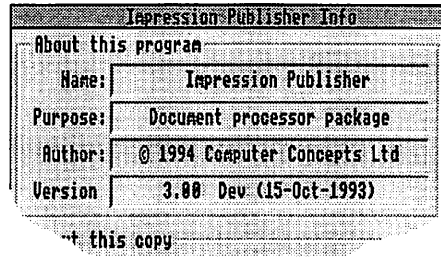
(The Advance package, sold by Acorn, contains a word processor based on Impression Junior.)

You can load files produced in Advance. You cannot save documents in Advance format.

Info boxes

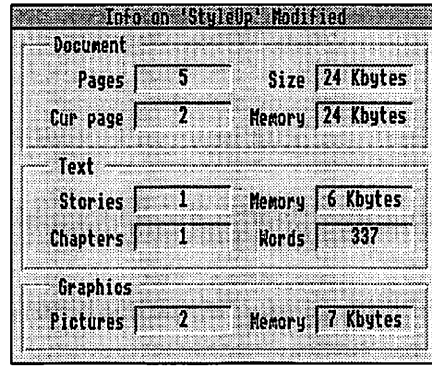
Impression has two Info boxes:

- One on the Icon Bar Menu (*Info*) gives information about the Impression application:



  The most significant item is ***Version***. If, for any reason, you contact Computer Concepts concerning Impression, we may ask you for the exact version number and date of the copy that you're using.

- The second Info box (*File ⇒ Info, Ctrl-F1*) gives information on the current document:



To remove the Info box from screen, perform some action on the main window. This could be typing something, moving the window, or moving the cursor.

The title bar may read

```
Info on 'document' Original
```

if the document has not changed since the last save, or

```
Info on 'document' Modified
```

if you have made changes and not yet saved them. If you have unsaved changes, the document title bar also has an asterisk (*) to the right of the document name.

Document

Pages - the total number of pages in the document.

Cur page - the number of the page containing the selected frame.

Size - the total size of the document including all text and graphics. This is the amount of space the document will occupy on the disc.

Memory - the amount of memory occupied by the current document. For smaller documents, ***Memory*** and ***Size*** will be equal, showing that the whole document is resident in memory. If there is insufficient space for the entire document in memory, part of it is saved to disc.

This value for memory usage is always greater than the sum of text memory and graphics memory. This is because additional space is required to hold details of the document's structure.

Text

Stories - the total number of text stories in the document.

Memory - the total memory required by all the text stories currently resident in memory.

Chapters - the total number of chapters in the document.

Words - the number of words in the current story.

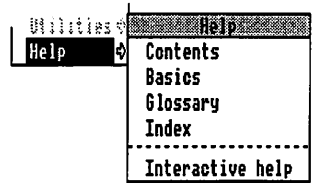
Graphics

Pictures - the number of pictures (graphics) in the document.

Memory - the memory occupied by those graphics currently resident in memory. This is *0* if all graphics have been saved to disc.

Impression Help system

This is controlled from *Help*.



Contents provides a list of subjects in the on-line documentation. Choose this if you are unused to on-line documentation.

Interactive help provides the standard Acorn help system.

The remaining options (which may vary from those shown in the illustration) provide fast access to specific areas of the on-line documentation.

Memory management

Files saved as a directory can be larger than the available memory by holding non-current parts of the document on disc. Usually this is only done automatically when memory is getting short. However *Minimise memory* on the Icon Bar Menu saves all non-current parts of the document to disc and reduces the memory requirements of Impression as much as possible.

Impression always keeps the text of the current chapter in memory. If a graphic is selected then this is also kept in memory. Therefore this menu option only has an effect if a document consists of more than one chapter or contains any graphics. It always saves any non-current documents to disc (if they have been loaded from file, or have been saved to file at least once).

Because of this feature, Impression always treats the document on disc exactly as if it were part of the document in memory. This has several consequences. For example, it is not possible to rename a file on disc while it is in Impression as this is

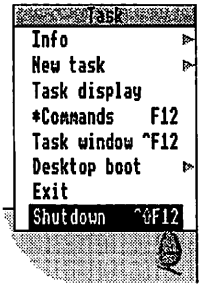
rather like removing part of the document. Impression cannot stop you using the filer *Rename* and *Delete* options and so we can only warn you: ***Never rename or delete a document file from the disc while it is currently being held as an Impression document.***

All sections of the document that have been saved to disc will show their frames as crosses. Clicking in any crossed-out frame restores that section to memory again (possibly saving some other part of the document to disc in the process if there is not enough memory to fit it all in). Therefore it is possible to scroll around all pages in a document, irrespective of its length. Those sections resident in memory show normally; those sections that have been saved to disc show as crossed frames.

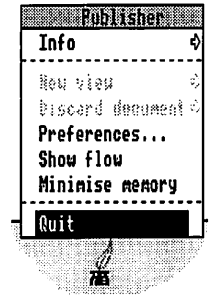
Quitting Impression

It is good practice before you switch off your computer to quit any applications that may be loaded. This is especially true with Impression as some of the files (such as auto-loaded dictionaries) are only updated when you quit Impression.

With RISC OS 3 you can either quit applications individually or use *Shutdown*.



To quit only Impression, choose *Quit* on Impression's Icon Bar Menu.



We strongly recommend that you always quit Impression before you switch off the computer.

If you have a document loaded with unsaved changes, an Alert box warns you. You then have three options:

- save the document and then quit,
- quit without saving the document and so discard the changes, or
- cancel the Quit request.

2.2 The Toolbar

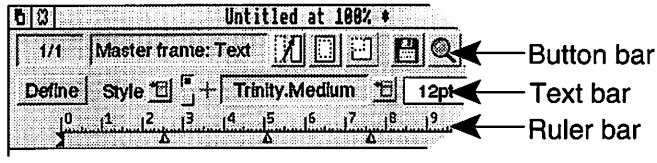
This section covers:

- using the Toolbar

Related sections of this manual:

- *2.1 The basics*
- *2.3 Text handling*
- *2.4 Printing*
- *2.5 Effects*
- *2.6 Styles*
- *2.7 Rulers*
- *2.8 Frame handling*
- *2.9 Graphics handling*
- *2.13 Spell checking & the dictionaries*
- *2.16 Customising Impression*

The toolbar provides a quick and simple way of selected many commonly used functions. The toolbar has three horizontal rows of information:



The *View ⇒ Tool bars* submenu controls which bars are displayed:

Ctrl-Shift-R turns the current selection ***on*** or ***off***.

You can also display the bars using *Preferences* on the Icon Bar Menu (*2.16 Customising Impression* describes *Preferences* in more detail.)

Button bar

a b c d e f g h i j k l m n o p q

This gives you general information and lets you easily select frequently used functions.

Screen mode 12 and similar modes cannot display the full width of the button bar and so crop the right-hand side of the bar. For this reason, the most frequently used functions are on the left of the button bar.

The first two options give information. You cannot edit them.

a Chapter/page number. This tells you the chapter and page number for the selected frame.

These numbers use Impression's internal numbering system which starts from chapter 1 page 1 and continue sequentially throughout the document. These numbers

are independent of any page or chapter numbers shown on individual pages.

Master frame: Blank ***b Information field.*** This gives information on either the current frame or the selected action.

The next three buttons select display options. Click on the button to select or deselect the option. Selected buttons have an orange background.

c Show flow. This shows how a text story flows from frame to frame. Refer to *2.3 Text handling* for information on flowing text stories. It also displays the page grid – see *2.8 Frame handling* for details.

This duplicates *Show flow* on the Icon Bar Menu.

d Frame outlines. The outline of the current frame is always displayed. This button controls the display of the outlines of other frames. Turning outlines off can make it easier to see how the document will look when printed.

It duplicates *Show frame outlines* in *Preferences* on the Icon Bar Menu and keyboard short cut *Ctrl-O*.

e Frame snap. This helps you accurately align frames when moving or creating frames. Refer to *2.8 Frame handling* for more details.

The button is shown ***on*** when any of the snap options (*Frames*, *Guides* or *Grid*) is ***on***. Click on the button to toggle the current snap selection ***on*** or ***off***.

The following buttons provide short cuts to commonly used functions:

f Save/Save text or graphics. **Select**-click on this button to display the *Save* dialogue box (keyboard short cut *F3*).

Adjust-click to display the *Save text/graphics* dialogue box (keyboard short cut *Ctrl-F3*)

Refer to *2.1 The basics* for more on saving.

g Scaling. **Select**-click on this button to display the *Scale view* dialogue box (keyboard short cut *Ctrl-F9*).

If you have previously altered the scale, **Adjust**-clicking on this button returns to the previous scale value.

***h* Cut.** This cuts to the clipboard (removes) either the selected region of text (if there is one) or the current frame.

Refer to *2.3 Text handling* for cutting text; *2.8 Frame handling* for cutting frames.

***i* Copy.** This copies to the clipboard (retains in place) either the selected region of text (if there is one) or the current frame.

Refer to *2.3 Text handling* for copying text; *2.8 Frame handling* for copying frames.

***j* Paste.** This pastes the clipboard contents.

Refer to *2.3 Text handling* for pasting text; *2.8 Frame handling* for pasting frames.

***k* New frame.** **Select**-clicking displays the *New frame* menu.

Adjust-clicking is a short cut for *Blank frame.*

Refer to *2.8 Frame handling* for more details.

***l* Change frame stacking order.** These move the selected frame or frames in front of or behind any overlapping frames. The top two buttons move the selected frame towards the front; the bottom two buttons towards the back. The right-hand buttons move the selected frame to the front or back in one operation. The left-hand buttons step the selected frame towards the front or back.

Refer to *2.8 Frame handling* for more details.

***m* Spell checker/dictionary.** **Select**-clicking displays the *Utilities* ⇒ *Spelling* menu.

Adjust-clicking displays the main dictionary.

Refer to *2.13 Spell checking & the dictionaries* for more details.

***n* Insert.** **Select**-clicking displays the *Utilities* ⇒ *Insert* menu.

Adjust-clicking inserts the current date at the cursor.

Refer to *2.3 Text handling* for more details.

***o* Print.** This displays the print dialogue box. Refer to *2.4 Printing* for more details.

p Quality. **Select**-clicking displays the *View ⇒ Quality* menu.

Adjust-clicking selects *Quality 10.*

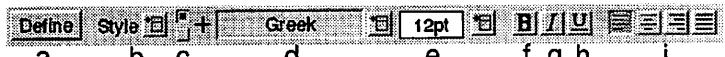
Refer to *2.9 Graphics handling* for more details.

q Alter frame/graphics. **Select**-clicking displays the *Alter frame* dialogue box. Refer to *2.8 Frame handling* for details.

Adjust-clicking displays the *Alter graphics* dialogue box if the selected frame is a graphics frame. Refer to *2.9 Graphics handling* for details.

Text bar

This bar gives you information on the current text font and size and lets you apply and remove the most commonly used effects. You can also define a new style or redefine an existing style using the ***Define*** button



a b c d e f g h i

a Define. This provides a quick way of defining a new style or modifying an existing style. Refer to *2.6 Styles* for more information.

b Style. Click on the menu icon to display a menu of available styles. This provides a quick way to apply or remove styles from the cursor or selected region of text. Refer to *2.6 Styles* for more information.

c Text effect/Tabs. Click on the top radio button to display the text effects buttons.

Text effects

For more details of these options refer to *2.5 Effects.*

The + is black if there are any effects applied at the cursor or in the selected region.

d Text font. Displays the current font. This is set by a text font effect (if any) or a style. It is blank if there more than one font used in a selected region.

Clicking on the menu icon displays a menu of available font families. This duplicates *Effects ⇒ Text font.*

e ***Text size.*** Displays the current font size. This is set by a text size effect (if any) or a style. It is blank if there more than one text size used in a selected region.

To change the text size either:

- type the new value into the editable field, or
- click on the menu icon and choose from the menu.

This duplicates *Effects ⇒ Text size.*

f ***Bold.*** This duplicates *Effect ⇒ Bold* and applies or removes the bold text effect.

g ***Italic.*** This duplicates *Effect ⇒ Italic* and applies or removes the italic text effect.

h ***Underline.*** This duplicates *Effect ⇒ Underline* and applies or removes the underline effect.

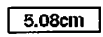
i ***Alignment.*** This duplicates *Effect ⇒ Alignment* and selects (from left to right) left-justify, right-justify, centered, fully justified.

The tabs and margins, when placed on the ruler, allow you to change the layout of your document. For more details of these options refer to *2.7 Rulers.*

a ***Text effects/Tabs.*** Click on the bottom radio button to display the tab and margin options.

b ***Select tab.*** Use these bump icons to select tabs on the ruler.

c ***Tab icons.*** This displays the available tabs. You can drag icons onto and off the currently displayed style ruler.



d ***Tab position.*** This shows the position of the currently selected tab. You can edit this field to move the tab. (You can also drag the tab along the ruler.)

Cms **e** ***Units.*** This selects the units used on the ruler. Options are:

- centimetres,
- inches ($^1/_{10}$ ths of an inch divisions),
- picas (6 picas = 1 inch),
- inches ($^1/_8$ ths of an inch divisions).

The ruler

This is described in *2.7 Rulers*.

2.3 Text handling

This section covers:

- entering text
- deleting text
- selecting regions of text
- importing text
- exporting text
- search & replace
- *the Insert* menu option

Related sections of this manual:

- *2.10 Master pages*
- *2.11 Chapters*
- *2.13 Spell-checking & the Dictionaries*
- *2.16 Customising Impression*

Entering text

You can only enter text in the ***selected frame***. (The selected frame has a green outline – for more on frames see *2.8 Frame handling.*) Position the mouse pointer where you want to insert text and click **Select**. If you click

- within some text, the cursor appears at the pointer,
- beyond the end of the text, the cursor appears at the end of the text,
- in an empty frame, the cursor appears in the top left-hand corner of the frame.

You can now start typing and, as you type, the cursor moves along the line.

When you reach the edge of the frame, the cursor automatically drops down to the next line – you don't need to press *Return* as you would on a normal typewriter. This means that if you later add or delete something in the middle of a paragraph, the line lengths automatically adjust to suit the new text.

Pressing *Return* indicates the end of a paragraph and an optional extra vertical gap appears between the end of the last line and the beginning of the next. The size of this gap is set by *Space below paragraph* in the current text style (see *2.6 Styles).*

You can also import text from a disc file. This is described later in *Importing text.*

When text fills a frame it attempts to flow into another linked frame. (Linked frames are described in *2.8 Frame handling.*) Usually Impression creates extra pages as needed. This is described in more detail in *Automatic page creation.*

Truncated text

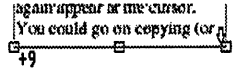
If there is no linked frame available, the excess text is not displayed. The hidden text is ***truncated***. A small red arrow appears in the bottom right-hand corner of a frame that contains truncated text.

(These arrows are not displayed if you have turned off frame outlines.)

Similar arrows are displayed if you choose *Show flow* in the Icon Bar Menu or the *Show flow* tool.

The Show flow tool

The number underneath the frame is the number of unplaced words.



The *Alter frame* dialogue box indicates if the frame has truncated text and the number of unplaced words. (This dialogue box is described in *2.8 Frame handling*.)

Moving around the text

You can move the cursor using the arrow keys ←↑↓→.

Using the arrow keys by themselves moves the cursor one line up or down or one character left or right.

Hold down the *Ctrl* key and:

← - moves to start of line,

→ - moves to end of line,

↑ - moves to the start of the story, and

↓ - moves to the end of the story.

The *Home* key acts like *Ctrl*-↑.

You can also move to a specific page or chapter using *Utilities* ⇒ *Find* ⇒ *Go to page* or *Utilities* ⇒ *Find* ⇒ *Go to chapter.*

Deleting characters

You can delete characters by using these keys:

- *Delete* - deletes the character to the left of the cursor,
- *Backspace* - same as *Delete*,
- *Ctrl-H* - same as *Delete*,
- *Copy* - deletes the character to the right of the cursor.

Selecting a region of text

At some stage you will want to delete or copy some text. Before you can do this, you have to select that text. There are several different ways of doing this. Three ways can be used to select text of any length; the others select a defined length of text (a word, a line, a paragraph, or a story). The selected text is always shown highlighted like this.

If you want to alter where the selected region ends, position the mouse pointer to the required place and click **Adjust**. This

lets you extend or reduce the selected region. You can also use *Shift* plus the cursor keys. (See *Using the cursor keys* below.)

Selecting any length of text

Dragging the mouse

1 Position the mouse pointer over the start of the region.
2 Press and ***hold down*** **Select** and drag the mouse pointer to the end of the required region. As you drag the mouse, the selected region becomes highlighted.
3 Release the mouse button when you reach the end of the region.

Clicking the mouse

1 Position the mouse pointer over the start of the region and click **Select**.
2 Move the mouse pointer to the end of the region.
3 Click **Adjust** and the region becomes highlighted.

This is the easiest way for selecting a large region of text.

Using the cursor keys

1 Position the cursor at the start of the region.
2 Hold down *Shift*. You can now use the ↑↓←→ keys to move the end of the selected region.

Selecting a word

Either

- double-click on the word, or
- type *Ctrl-Q*.

(Double-click means press and release **Select** twice in quick succession.)

Selecting a line

Either

- position the mouse pointer anywhere on the line and triple-click (three times) on **Select**, or
- type *Ctrl-L*.

Selecting a paragraph

Either

- position the mouse pointer anywhere in the paragraph and quad-click (four times) on **Select**, or
- type *Ctrl-2*.

Selecting the whole story

Either

- type *Ctrl-A*, or
- use *Edit ⇒ Select text story*.

A story is a self-contained block of text. It could fit in a single frame or flow across many frames on several pages. You cannot have more than one story in a frame. Stories cannot flow between chapters (see *2.11 Chapters*).

Select text story selects all the text in the current story. This is much quicker than putting the cursor at the start of the story and drag-selecting the entire story.

This option would normally be used to apply a style or effect over the entire story or delete or copy the entire story.

Deselecting a region of text

If you no longer want the region of text selected, you can:

- type *Ctrl-Z*, or
- press one of the arrow keys, or
- click in the region keeping the mouse stationary, or
- click outside the region.

Replacing text (overwrite mode)

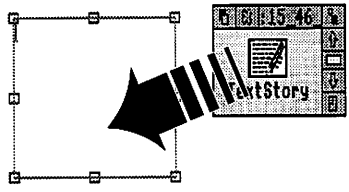
Unlike many older word-processors, Impression does not have a replace or overwrite mode. Instead, select the region that you wish to replace (see above). When you start typing, the selected region is cut to a special area of memory (called the ***Clipboard***) and your new typing appears in its place. (If a large region is selected, an Alert box asks for confirmation before replacing.)

If you have made a mistake, you can restore it by pasting it back. (See *Cut & Paste.*)

Importing text

You can import text from outside of Impression. If the frame already contains some text, you must first position the cursor where you want to make the insertion. No action is needed if the frame is empty.

Plain text or text from other Impression documents can be incorporated simply by dropping their file icon onto the required frame.



Text in certain other formats can be imported but you must first load an appropriate loader module. In the Impression package, modules are included for *Acorn DTP, BASIC, C, CSV, FirstWord Plus, Inter-Word, Pipedream, RTF, WordPerfect, WordStar,* and *Wordwise Plus* formats.

See *Appendix 8: Loading alien file formats* for more details of importing text.

Moving blocks of text

Impression has two ways of moving text – Drag & Drop and Cut & Paste.

Transferring a region of text also transfers any embedded frames with the region. (For more information on embedded frames, see *2.8 Frame handling.*)

Drag & Drop

You can Drag & Drop within a document. You cannot use it between documents.

1 Select the region of text you want to move.

2 Move the pointer over the selected region.

3 Press and hold down **Select**. The pointer changes shape. You can now drag the selected region to its new location in the document. (A red cursor shows the insert point.)

If you want to copy the region and not move it, hold down *Shift* as you drag the selected region in step 3.

To position the cursor in the selected region (rather than Drag & Drop), press and hold down **Select**. (See also *Deselecting a region of text.*)

Cut & Paste

You can Cut & Paste within the same document or to another document.

You can either copy the text (which leaves it in place) or cut it (which removes it from its original position).

Cutting or copying text may fail because of lack of memory; an Alert box tells you if this happens.

Copying to the clipboard

First select the text then either

- type *Ctrl-C*, or

- click on the *Copy* tool on the Toolbar, or
- use *Edit ⇒ Copy text.*

Cutting to the clipboard

First select the text then either

- type *Ctrl-X,* or
- press the *Delete* key, or

- click on the *Cut* tool on the Toolbar, or
- use *Edit ⇒ Cut text.*

There are two other cut options; *Cut line* and *Cut word.* To use these, position the cursor anywhere inside the line or word. You do not have to select the text.

- To cut the line containing the cursor, type *Ctrl-Copy.*
- To cut the word under the cursor, type *Ctrl-D.*

Deleting

Deleting removes the text completely; no copy is made to the clipboard. It is useful if you want to delete and discard a large region of text without affecting the clipboard.

Either

- type *Ctrl-K,* or
- use *Edit ⇒ Delete text.*

An Alert Box asks you to confirm the delete.

Pressing a Delete key ***cuts*** the selected region to the clipboard. It does this rather than ***delete*** as you can then undo the action using *Paste.* However, as cutting to the clipboard holds the text in memory, this operation may fail because of lack of memory. In this case delete the text using *Delete text* rather than *Cut text.*

Pasting (Inserting) an item

You always paste the item held on the clipboard.

Text is pasted at the current cursor position or overwrites the selected region of text.

Either:

- press the *Insert* key,
- type *Ctrl-V*, or
- click on the *Paste* tool on the Toolbar, or
- use *Edit* ⇒ *Paste text.*

Pasting preserves the clipboard contents so you can paste more than once.

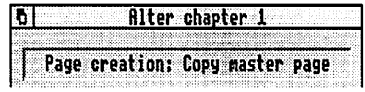
Automatic page creation & deletion

Creating pages

There are two options for creating new pages:

- ***Copy master page***. When text flows out of a master page frame and there is no other frame for it to flow into, Impression creates a copy of the current master page. This is the usual option. (For more information on master pages see *2.10 Master pages.*)
- ***Copy previous page***. When text flows out of any frame (master page or local) and there is no other frame for it to flow into, Impression creates a new page with copies of the frames from the previous page. Local text or blank frames are copied from the previous page but text frames are empty. Local graphic frames are only copied if they are grouped frames.

The choice of options is controlled by the *New chapter* dialogue box. The page creation rule used in any chapter is shown in the *Alter chapter* dialogue box.



(These dialogue boxes are described in *2.11 Chapters*.)

Documents created in Impression Junior (an earlier version of Impression Publisher) don't have master pages and so if these documents are loaded, they will always use the *Copy previous page* method.

If your document uses local frames for flowing text stories and *Copy master page* is the selected option, Impression does not automatically create extra pages. You must do this manually using *Edit⇒ Insert new page*. This creates a new page following the current page, containing all the frames from the master page. If your document consists solely of pages created automatically as text is entered, then this option has little use – Impression always creates pages as you type. However, this option is useful if you want to include blank pages in a document. If you have pages with local frames on, inserting a new page shifts all those pages along.

Another use is when the master page consists only of Guide frames. In this case, there is no master text frame, so no new pages are created as you type. Every time you wish to start a new page, you can use *Insert new page*, then add any frames necessary to your page. This method is likely to be used when creating a magazine, where column widths may be fixed, but the height and layout of the columns varies from page to page.

If you create a new page by using *Insert new page*, any frames on that new page are not linked to other frames, as they would normally be if the page was automatically created. You may therefore need to link the frames to create a flowing text story. For details of this operation, refer to *Flowing text* in *2.8 Frame handling*.

Do not use this option if you just want to force text to start at the top of the next frame. For this, use *Frame ⇒ Force to next.* (This has a keyboard short cut of *Ctrl-G.*)

Deleting pages

Edit ⇒ Delete page deletes the page that contains the currently selected frame and all frames on that page. Because text and graphics may be irretrievably lost, you are asked to confirm the action.

If you try to delete a page that was automatically created and has no changes made, then the text story will no longer fit within the available frames and so Impression automatically creates another new page. It might appear that nothing has happened.

If the amount of text is reduced so that there are surplus pages, these are deleted by Impression.

Therefore, *Delete page* is normally used to delete pages that:

- have no flowing master text frames or
- have new local frames placed on them or
- were created using *Edit ⇒ Insert new page.*

You cannot directly delete a blank page as, by definition, a blank page has no frame to select. You must first create a new frame on the blank page and then select this option.

If the page is based on two facing pages, both pages are deleted.

If a chapter has only one page, use *Edit ⇒ Delete chapter.*

Hard space

Sometimes you don't want the end of a line to divide two pieces of text. Examples are telephone numbers (*0442 63933*) and word pairs like *RISC OS.* In such cases, use a hard space (*Alt-space*) between the two parts. This has the appearance of a normal space but Impression never splits text joined by a hard-space.

Also, when text is fully justified, normal spaces may be stretched to increase the separation between words. A hard-space is treated as a fixed-width character and is never stretched.

The *Character* fonts

These are a special family of fonts for use only with documents that are to be printed as pure text using the *Draft print* option. (Draft printing is described in *2.4 Printing*.) They are also useful if you want to use Impression as a text editor where it is important to have the text as clear and as readable as possible.

Unlike the other fonts, they are bit-mapped and not outline fonts and should not be used with the conventional RISC OS printer drivers. (If printed using the RISC OS printer drivers, they will give a poor-quality result.)

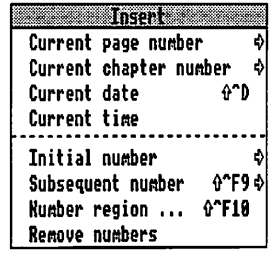
At 16pt no anti-aliasing occurs and these fonts do not have the fuzzy appearance of other fonts; Character font text appears crisp and sharp on the screen. At larger or smaller sizes, they may appear slightly fuzzy. If you want to use the Character fonts at smaller sizes and still want a sharp image, it is possible to use 13pt text and 120% window scaling.

Letters and other characters in the **Character monospaced** fonts are (as the name suggests) all of the same width. They are suitable for 9-pin and those 24-pin printers that cannot support proportional printing. They are almost identical in appearance to the system font.

The other Character fonts are proportionally spaced (the characters vary in width), and are suitable for those printers that support proportional printing. You will probably find that the proportional fonts are easier to read when displayed on the screen.

The *Insert* menu option

Use *Utilities* ⇒ *Insert* or the *Insert* tool



Use this to insert the current:

- page number,
- chapter number,
- date,
- time,

and control sequence numbering.

Current page number
Current chapter number

Normally page and chapter numbers start from **1** at the beginning of the document. The *Alter chapter* and *New chapter* dialogue boxes let you reset the numbering at the start of any chapter. See *2.11 Chapters* for details of these dialogue boxes.

If you insert a page or chapter number on a normal page, it shows the correct number. It automatically updates if subsequent edits or adding or deleting chapters change the page or chapter it appears on.

Page numbers on master pages are shown as **<pn>**; the correct page number is substituted on all normal pages based on that master page. Similarly, chapter numbers are shown as **<cn>** on master pages.

You can apply styles and effects to page and chapter numbers. Impression treats page and chapter numbers as single charac-

ters – you cannot delete or modify just part of a multi-digit number.

Page and chapter numbers can be

- numeric **1 2 3 4**,
- upper case Roman **I II III IV**, or
- lower case Roman **i ii iii iv**.

Current date
Current time

Insert current date has a short cut of *Ctrl-Shift-D* or you can **Adjust**-click on the *Insert* tool.

These read the current date or time from the computer's internal clock. You can edit the inserted values as normal text. Note that the inserted values do not update automatically; they show the date and time when you inserted them.

Sequence numbering

Many types of document include sequentially numbers. Examples are specifications, operating instructions and parts lists. Controlling this numbering is easy in Impression.

You can either:

- insert numbers individually, or
- select several paragraphs and number the paragraphs in one operation.

If you later remove one of the numbers or add another one in the sequence, subsequent numbers change to reflect the change.

Inserting numbers individually

1 Position the cursor where you want to start the numbering.

2 Insert the initial number using *Utilities* ⇒ *Insert* ⇒ *Initial number.*

3 To insert subsequent numbers, position the cursor and use *Utilities* ⇒ *Insert* ⇒ *Subsequent number* (or *Ctrl-Shift-F9*).

If the sequence starts from **1**, you can also insert the initial number using *Utilities* ⇒ *Insert* ⇒ *Subsequent number.*

Numbering several paragraphs in one operation

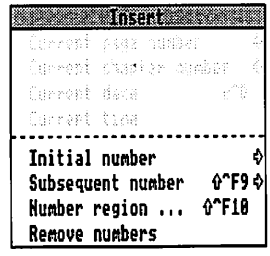
1 Select the paragraphs you wish to number.

2 Choose *Utilities* ⇒ *Insert* ⇒ *Number region* (or *Ctrl-Shift-F10*). This displays a dialogue box (described below).

3 Set up the dialogue box as required and click on *OK.*

This inserts a number or bullet point at the start of each paragraph you selected. Numbers can be preceded and followed by optional characters (such as brackets) and then a *Tab.*

Sequence numbering menu options:



Initial number

Use this option for the first number in the sequence. Numbering can be:

- numeric (1, 2, 3...)
- upper-case roman (I, II, III...)

- lower-case roman (i, ii, iii...)
- upper-case alpha (A, B, C,...)
- lower-case alpha (a, b, c,...)
- bullet points (•).

Subsequent number

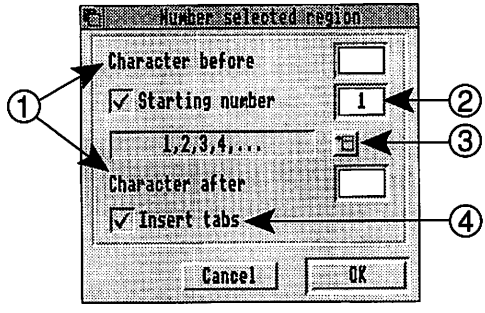
Keyboard short cut *Ctrl-Shift-F9*

Use this option to insert the next number in the sequence.

Number region

Keyboard short cut *Ctrl-Shift-F10*

This option provides a quick way to number several paragraphs. It also gives you extra controls.



① Character before/after

This lets you insert a character before or after the number (such as enclosing the number within brackets).

② Starting number

You can either:

- continue from previous numbers (deselect the button), or
- start from the number in the editable field.

③ Number type

Click on the menu icon to display a menu of numbering types. (Listed above.)

④ Insert tabs

Select this option to insert a *Tab* character after the number and any *Character after.*

Remove numbers

Use this to remove paragraph numbers from the selected region of text.

Search & Replace

This lets you find:

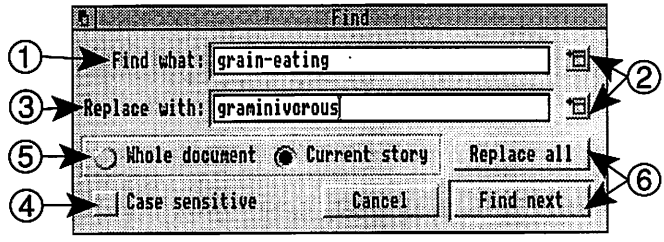
- a specified word or phrase,
- selected occurrences of a word or phrase and substitute a different word or phrase, or
- all occurrences and substitute a different word or phrase.

You can also search for styles – see *Advanced searching.*

You can search either within the confines of the current story or through the entire document.

Find dialogue box

Utilities ⇒ *Find text* or keyboard short cut: *F4*



The Find dialogue box

① Find what:

Type in the word or phrase you want to search for.

② Style buttons

These are used when you want either *Find what:* or *Replace with* to include style information. See *Advanced searching* for more information.

③ Replace with:

Type in the replacement word or phrase.

If you want only to find and not replace, you can leave this field blank.

Wildcards

You may not want just to find an exact match. Suppose you want to find ***fill***, ***full*** and ***filter***. In this case, you use wildcards in the search string. These are special characters that match against a number of characters in the text. There are three wildcard characters:

- **#** matches with any single character
- ***** matches with any group of characters in a word
- **@** matches with any group of characters

If you actually want to search for one of these characters, refer to *Advanced searching* later in this section.

④ Whole document / Current story

These switches let you search only in the current story or all stories in the document. *Search whole document* in *Preferences* on the Icon Bar Menu selects the default setting.

If you choose *Whole document*, the search starts at the beginning of the document and runs through each story until the end of the document.

If you choose *Current story*, the search starts at the cursor position and finishes at the end of the story

⑤ Case sensitive

This switch determines whether searching takes account of the case of the words. To show its use, suppose we want to

replace **abc** with **xYz**.

If unselected, then the search will match on ***abc***, ***Abc*** and ***abC***. When the substitutions are made, capital letters are retained so you would get ***xyz***, ***Xyz*** and ***xyZ***. The capital **Y** in the substitution word has no effect.

If case sensitive is selected, then the search only matches ***abc*** and not ***Abc*** or ***abC***. ***xYz is*** substituted for ***abc***.

Replace all / Find next

When you have decided

- what text to search for
- whether to be case sensitive or not
- whether you want to replace it
- whether you want to deal with the whole document, or just the current story

click on either *Find next* or *Replace all*. Pressing *Return* is the same as clicking on *Find next*. Either option starts a search for text matching that in *Find what:*

If a match is found:

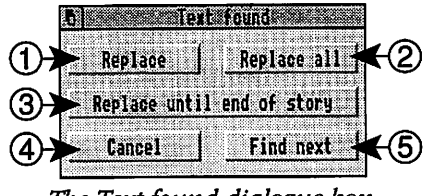
Find next displays the *Text found* dialogue box (see below),

Replace all replaces the text with the *Replace with:* text and continues the search.

With either selection, how far Impression searches depends on whether you've selected *Current story* or *Whole document*.

The *Text found* dialogue box

This dialogue box is displayed if you selected *Find next:* and a match is found.



The Text found dialogue box

① Replace

This replaces the highlighted occurrence of the *Find what:* string with the *Replace with:* string. Impression then performs a *Find next* to find the next occurrence of the search string. If the *Replace with:* field in the *Find* dialogue box is empty, then clicking *Replace* deletes the found text.

② Replace all

Replace all occurrences of the *Find what:* string with the *Replace with:* string.

This button duplicates *Replace all* in the *Find* dialogue box. Its advantage is that replacement can start part-way through a document. It also lets you find a word, make edits, and then continue.

③ Replace until end of story

Replace all occurrences of the *Find what:* string, from the current highlighted occurrence to the end of the story, with the *Replace with:* string.

For single story documents this option has the same effect as *Replace all.*

④ Cancel

This terminates the search.

⑤ Find next

Find the next occurrence of the *Find what:* string in the text. If no match is found in this story, and the *Whole document* button was set in the *Find* dialogue box, Impression moves to the next story (if there is one) and tries to find the string. This process continues until Impression finds either a match or the end of the text. When all the text has been searched, the message *Couldn't find search string in text,* is displayed.

Truncated text

If truncated text is encountered while searching (that is, text overflows one frame, and has no other frame to flow into), the search does not end. Impression can then tell you that it has found some text but cannot display it on the screen.

Advanced searching

This section describes how to perform search and replace operations involving:

- control characters such as carriage-return
- characters not on the keyboard (such as ©)
- styles.

Where these characters appear in your search or replace strings use the format
curly bracket – style information or character – curly bracket

Examples are:

`{CR}`	carriage-return (end of paragraph character)
`{Tab}`	tab character

For © (character 169) you can use either
`{Code 169}` or
`{\169}`

Appendix 5 lists the character sets and character numbers.

* # and @ are wildcards and cannot be used directly in search strings. Instead, use their numbers

*	42 – enter as `{Code 42}` or `{\42}`
#	35
@	64

The case of characters within commands is not important. The commands are a subset of DDF. The on-line help contains more details on DDF commands.

The *Style buttons* (② in the illustration of the *Find* dialogue box) make it easier to include style commands into the *Find what:* and *Replace with.* Clicking **Menu** on either field or clicking on the style buttons brings up a menu of available

styles. Choosing a style inserts it into the field at the cursor.

The *Find what:* and *Replace with:* fields can contain any combination of these commands and ordinary characters. For example, to search for the phrase '***spinning card***' and replace it with the word '***thaumatrope***' in a pre-defined style called *Index*

Find what:

```
spinning card
```

Replace with:

```
{"Index"}thaumatrope{"Index"}
```

(You can insert style information at any point in the search or replace string.)

To delete all occurrences of the style *Index* you would enter

```
{"Index"}@{"Index"}
```

into *Find what* and leave *Replace with* blank.

2.4 Printing

This section covers:

- the Print dialogue box

Related sections of this manual:

- Appendix 7: Draft printing

When you have finished your document, you will probably want to print it. Impression offers two modes of printing:

- a high-quality mode which uses the fonts displayed on screen and prints the graphics, and,
- where useful, a text-only mode which uses the character sets provided by the printer and does not print graphics. (This is only useful with slower printers. Faster printers such as laser and most ink-jet printers always use high-quality mode.)

With either mode, you can:

- print single or multiple copies
- print all pages or only a selection

and, for high-quality mode only:

- scale (up or down) the page size so you can, for example, to print an A4 page on screen to A5 sized paper.

The *Print* dialogue box controls the various options in Impression. The current print settings are stored when you save the document and redisplayed when you next call up the *Print* dialogue box.

Printing time depends on the type of printer and on the complexity of the page. Some printers (such as dot matrix) can take 4-5 minutes to print a complex page. Others, such as Computer Concepts' LaserDirect, a few seconds. Printers such as LaserDirect and PostScript retain the page image in their memory and so printing multiple copies of the same page takes only slightly longer than printing a single copy.

Some printer drivers need setting up to define the type of interface (serial or parallel) and protocol required. To do this, refer to Acorn's *User Guide* and the manual for your printer for interface details.

Pages and Paper

To avoid confusion, throughout this section:

'***pages***' refers to the pages of an Impression document and '***paper***' refers to the sheets of paper produced by the printer.

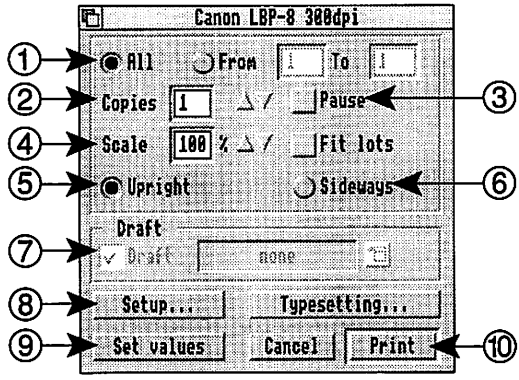
The *Print* dialogue box

To display this dialogue box:

- use *File* ⇒ *Print*, or
- click on the *Print* tool on the Toolbar, or
- press *Print*.

You can also display this dialogue box using *Ctrl-Print*. This resets the print options to their default states.

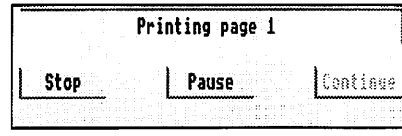
You must have a printer driver or a printer module loaded before you can print anything.



The print settings are stored with the document. You may want to set these up and store them but not to print anything now. To do this

1 make any required changes,
2 click on ⑨ *Set values*,
3 save the document.

Clicking on ⑩ *Print* (or typing *Return*) starts printing. All Impression windows are blanked, the pointer turns into an hourglass and the *Print information box* appears:



While printing, the hourglass occasionally turns back into a pointer for a short period. At this point, Impression is giving other programs a chance to operate, offering a small amount of multi-tasking.

Clicking *Pause* (even while the hourglass is up) pauses printing after a few seconds, allowing other programs to be used. (Note: when the program is paused you cannot close or resize Impression windows.)

Clicking *Continue* continues printing.

Clicking *Stop* terminates the printing, although it waits for the next round of multi-tasking. This can be a few minutes on a PostScript printer.

① All / From-To

Select *All* to print all pages in the document. (The *To* box displays the number of pages in the document.)

Select *From* to print the range of pages specified in the two editable fields. These use the physical page numbers, which always start from *1* and are independent of any page number shown on the document. The actual number of the current page (the page containing the selected frame) is shown:

- in the Info box (*File* ⇒ *Info* or *Ctrl-F1*) or
- on the Toolbar:

② Copies

This is the number of copies of each page you want to print.

For multiple copies of a multi-page document, Impression can either:

- print each page n times (1,1...,2,2...), requiring you to sort the pages into order by hand, or
- print n copies of the document in order (1,2...,1,2...).

This is controlled by the *Collated* switch (described later in the *Setup* dialogue box).

③ Pause

When this switch is selected, printing suspends after each page. This is useful if you want to print on single-sheet paper without a sheet feeder. Press *Continue* on the print information box to continue printing.

④ Upright / Sideways

These buttons tell Impression whether to print upright (*portrait*) or sideways (*landscape*) on the page. For example, use sideways to print two A5 pages onto an A4 sheet of paper.

⑤ Scale

The scaling field affects how large the page will appear on the paper. 100% is full size but the actual size depends also on how large the pages are in Impression. By default, the page size is exactly A4. However, if you require an A4 page to be printed at A5 size, the scaling factor can be reduced to 70% or 66% dependent upon the setting of *Ignore page borders* (see later in *Setup* dialogue box). At 100% measurements made on the page should always be accurate on all printers; for example, a frame of 100mm width should always print as 100mm wide.

The two bump icons to the right of the scaling field increase or decrease the scale in steps of 1%.

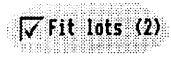
⑥ Fit lots

When this switch is ***off***, Impression prints one page on one sheet of paper.

When this switch is ***on***, Impression fits as many pages as it can on one sheet. For this option to be of any use, the *Scaling* field should usually be set to less than 100%, so that more than one page can fit on the paper.

The scaling required to fit several pages on one sheet of paper depends on the *Ignore page border* switch (in the *Setup* dialogue box). If this is ***off***, account is taken of the non-printable margins around the edge of the page. If this is ***on***, these margins are ignored.

As a guide the number in brackets to the right of *Fit lots* tells you how many pages can fit on a sheet of paper.



(Impression assumes all the pages are the same size as the first.)

So, for example, one particularly useful option is to print two pages of an A4 document on a single sheet of A4 paper. For this, use these settings:

Sideways

Scale 66%

Fit lots (the ***2*** after *Fit lots* tells you that Impression can fit two pages on one sheet of paper)

⑦ Draft

With some types of printer you can use the fonts built into the printer for faster printing of text. However, there are a limited number of fonts available and you cannot print illustrations. Suitable printers are:

Epson FX, LQ, LX, RX ranges and compatibles,

Canon BJ-10 range,

Hewlett Packard Deskjet and Laserjet ranges.

If you have Computer Concepts' TurboDriver software for Canon or Hewlett Packard printers, draft mode offers little speed advantage.

Before you can use draft printing you must have a special printer module loaded. (These modules are different to the standard RISC OS printer drivers.) The field to the right displays the current type of printer module loaded. To display a list of available printer modules either:

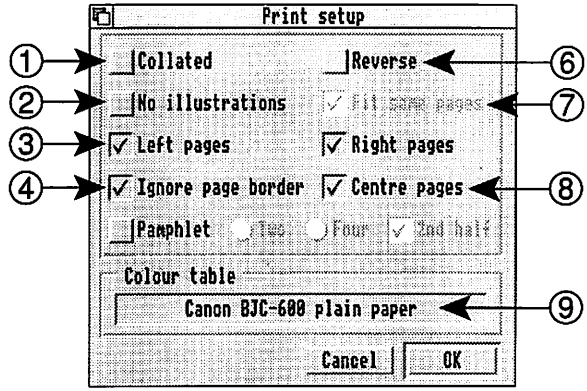
- click **Menu** on the editable box, or
- click on the arrow to the right of the name.

Refer to the *Appendix 7* for more information on draft printing.

⑧ Setup/Typesetting

Click on these to display extra dialogue boxes.

Print setup dialogue box



① Collated

If you want to print 3 copies of a 4 page document:

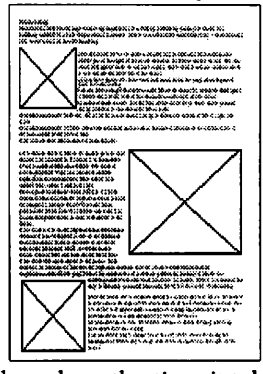
- with *Collated* ***on*** the pages are printed in the order *1,2,3,4, 1,2,3,4, 1,2,3,4*
- with *Collated* ***off*** the pages are printed in the order *1,1,1, 2,2,2, 3,3,3, 4,4,4.*

Some printers, such as dot-matrix printers, take the same time to print a page, even if that page has already been printed once. Other printers keep an image of the current page. As a result, one copy of a page might take several minutes to print, but subsequent copies of that page considerably less time. So for more than one copy of a large document, it is faster on some printers to leave *Collated* ***off***, while for others no advantage is gained. In the latter case the switch may be turned ***on***, allowing Impression to stack the pages in order.

② No Illustrations

When printing a page to certain printers (notably PostScript) the more information there is on the page, the longer a page takes to print. Graphics often take a particularly long time,

especially large sprites. It is often useful to print out just the text on a page, and *No illustrations* can be used to speed up this function. When it is selected, any graphic frames on a page are replaced by boxes with a cross through them.



This can dramatically reduce the time it takes to print pages on PostScript based printers.

③ Left pages / Right pages

These let you print only left-handed pages, only right-handed pages, or all pages. Note that the 'handedness' of a page has nothing to do with the page number, but depends on whether it has been created as a left/right pair.

When using Pamphlet mode, these two switches are ignored, as Pamphlet mode only makes sense if you are printing left and right pages.

④ Ignore page border

There is usually a small border around the edge of the page where the printer cannot print. This is called the ***print border*** or the ***page border***. Impression can take account of this border and printing is relative to the page borders. Some printers have a larger border on the left than on the right and this results in the printing being offset to the right.

With this option ***on***, the page borders are ignored and the page is printed relative to the edges of the paper. Use this

option if it is important that items on the printed paper are in exactly the same position as they appear in the document.

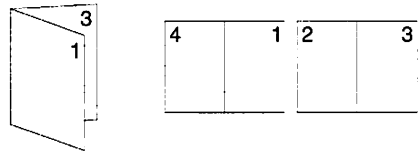
This has an effect on *Fit lots* which normally tries to fit the pages within the print borders. With this option ***on***, Impression prints pages within the full dimensions of the paper. This allows a slightly larger scaling. For example, to exactly fit two A4-sized pages on an A4-sized sheet of paper with this option ***off*** may require a scaling of 66%. With this option ***on***, you can use 70%.

You can make the current page borders visible on the screen using *View* ⇒ *Print borders* or *Ctrl-Shift-O*.

⑤ Pamphlet

One application for which a program like Impression is often used is to produce small booklets or leaflets. Quite often these are A5 sized, but printed on both sides of an A4 sheet, then folded over and stapled.

Selecting *Pamphlet* gives you the option of 'Two-up' or 'Four-up' printing. Selecting *Two* tells Impression that you wish to print a pamphlet with two Impression pages on each side of a sheet of paper, ready to be folded.

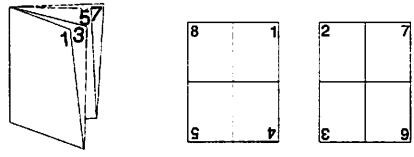


This option should be used in conjunction with the scaling, and usually with the *Sideways* mode as well. For example, when printing two A4 pages on one A4 sheet, set:

Scaling to 66%, and

Sideways.

'Four-up' printing prints four pages on each side of a sheet of paper.



This would normally be used in *Upright* mode. For example, to print an A6 pamphlet from A4 pages, set:

Scaling to 46%, and

Upright.

When Impression starts printing, it prints one side of the sheet. When finished, it beeps, and asks you to turn the pages over and feed them back into the printer. Then it prints the other side.

Note: If you are using a page printer such as a Laser printer, the message to turn the paper over might appear before all the pages have been printed. Wait until the printer has finished printing.

It is important to turn the pages over so that they are the right way round. Different printers feed paper in different ways. You may need to experiment to find the correct way to turn the paper.

2nd half

When this switch is ***on***, Impression prints only the second side of the pamphlet. This makes pamphlet printing easier as you do not have to print the second side immediately after the first (which can lead to paper jams).

If you only want to print the first half, turn *2nd half* ***off***. When the first half has been printed press the *Stop* button on the *Print information* box.

⑥ Reverse

This controls the order in which Impression prints multiple page documents. With this option ***off***, printing starts with the first page. With the option ***on***, printing starts with the last page.

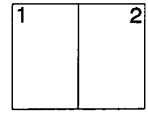
Printers stack paper either face-up or face-down after printing. If they are stacked face-up the pages will be in the wrong order. *Reverse* lets you change the order so that pages stack in the correct order.

This switch has no effect when printing the first side in Pamphlet mode. Pages are always printed in the same order. (First and last pages printed first.) When printing the second side, *Reverse* applies to cater for the different stacking orders.

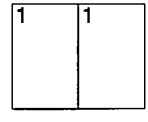
⑦ Fit same pages

This has no effect unless *Fit lots* is selected and the scaling allows more than one Impression page to be printed on a sheet of paper.

If this option is ***off***, as many **different pages** as can fit on the paper are printed.



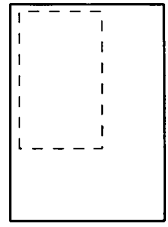
If this option is ***on***, as many copies of the **same page** as can fit on the paper are printed.



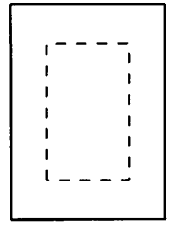
⑧ Centre pages

With this button ***off***, pages are printed relative to the top-left corner of the paper. With this button ***on***, pages are centered within the available space.

This option is most noticeable when, for example, printing a single A5 page on an A4 sheet of paper. With *Centre page* ***off***, the page is printed close to the top-left corner.



With it ***on***, the page is centered on the paper.



⑨ Colour table

Factors such as ink colour and print density vary greatly between printers. As a result, the same document can look different when printed on different printers. Colour tables compensate for this on printers that use four-colour (CMYK) printing such as Canon BJC-600/800 in combination with TurboDrivers (see note) and when producing PostScript separations.

Colour table shows the name of the current table. If you do not want colour correction, choose *Linear table*. To change to a different table, choose *Preferences* on the Icon Bar Menu. *Colour table* is the last option on the scrolling list. (*2.16 Customising Impr*ession describes *Preferences* in more detail.)

Note:
The Acorn printer drivers for the Canon BJC and other CMYK printers do not use CMYK printing. Instead, they use the RGB system which is converted to CMYK in the printer driver.

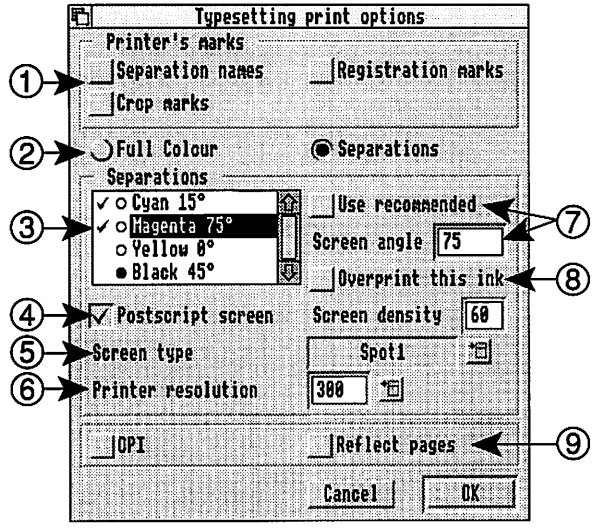
Therefore, colour tables do not affect printing on these systems.

The Impression colour tables are used to create the CMYK separations when separating to PostScript devices or to CMYK colour printers using the TurboDriver printer drivers. Specifically the tables adjust the intensity levels of the separate C, M, Y and K inks. It also controls the level of grey component replacement, the process by which black ink is substituted for neutral colours. Different tables use different settings to compensate for non-linearities in the inks of different printer types, or to compensate for dot-gain or other printer artifacts.

Creating curves is a skilled and specialised process. However, for those interested in creating their own tables for different printers we can supply a simple curve editing utility to create alternative colour tables. The cost is £39 + VAT. Because of the nature of the program, no support can be provided and it's supplied "as is".

Typesetting dialogue box

This dialogue box sets parameters for typesetting monochrome and colour-separated output for commercial printing. Refer to the *Commercial Printing Guide* for explanations of many of the expressions used below.



The *OPI* button is greyed unless you have the optional OPI supplement.

① Printers marks

When producing colour typeset output, you normally require both *Separation names* and *Registration marks*. They are not needed for monochrome work. Both options are greyed when *Full colour* is selected.

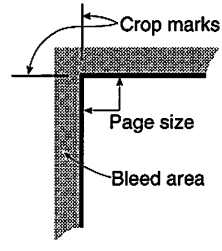
Separation names prints the appropriate colour name on each separation. The names are those displayed in the separations options box (see below).

Registration marks are targets (see left) printed around the edge of the image. They allow the printing press operator to accurately align the colours when printing.

Crop marks

Crop marks are used by commercial printers as aids to guillotining the paper after printing. They are printed in the margins of the paper in the area that will be discarded after guillotining. It therefore follows that if you want a full-size A4 image with crop marks, it must be printed on paper larger than A4.

If you want to print crop marks and use *Fit lots*, the scaling must be smaller than usual. For example, to fit two A4 pages on an A4 sheet of paper normally requires a scaling of 70% (with page borders ***off***). To fit crop marks requires a scaling of 62%.



② Full colour/Separations

Use *Full colour* when printing a monochrome document or when printing to a colour printer. (The output generated by this option is known as *composite output.*)

Select *Separations* to produce typeset separations for commercial printing. (Or for proofing the colour separations to a monochrome printer.) Also use this option when using spot colours – there is more information on this in the *Commercial Printing Guide.*

③ Separations option box

This lets you select which separations to print and which to overprint. (The ticks show separations to print – ***Cyan*** and ***Magenta*** in the illustration – and the black dots show which to overprint – ***Black*** in the illustration.)

To change the print setting click on the tick area.

To change the overprint setting click on the circle.

You may want to print only selected separations for several reasons:

- Your document may not use all four colours (spot-colour work). Printing unwanted separations wastes time and materials.
- You may want to print a single separation to proof it.
- If printing to disc for sending to an typesetting bureau, the four separations can be bigger than a floppy disc. You then need to create two or more files on different discs.

If you are producing typeset film separations -

Always have the complete set of separations produced at the same time. Temperature, humidity, and operating conditions within the typesetter all affect the film.

For the same reason, never rerun just one film from a set. Always rerun the complete set.

④ PostScript screen

Set this option if you are outputting to a PostScript device and you want to specify variables such as resolution of the half-toning screen (this determines the number of grey-levels in the printed output) and screen angles.

The *Alter graphic* dialogue box lets you specify a screen value for individual graphics. Any value set in *Alter graphic* takes priority for that graphic.

Screen density

Typical values are

- outputting to a laser printer ***60-70***;
- for monochrome typesetting ***100-120***;
- colour typesetting ***150***.

⑤ Screen type

Half-tones and tints are printed as clusters of dots. There are several ways of arranging the individual cells within each cluster. Screen type offers you several alternative arrangements. Unless you are experienced in producing typeset output we recommend always using the default value.

⑥ Printer resolution

Set this to match the resolution of the printer or typesetter. If you are producing output for typesetting, check with the bureau which resolution to use.

Either type a value into the editable field or choose from the menu of common resolutions.

⑦ Screen angles

These only apply when outputting to a PostScript device such as an typesetter.

Half-tones and tints are printed as clusters of dots on a regular grid or screen. The human eye is particularly sensitive to horizontal and vertical alignments. For this reason, the most prominent colour – black – is usually printed with the grid rotated to 45°.

There is a further problem when printing different colours. Because of slight movements during printing, interference patterns are easily created. (These are called ***moiré patterns***.) To avoid this, each colour grid is rotated by a different angle. These angles must be carefully chosen and vary with resolution. For these reasons we recommend always selecting *Use*

recommended. Only change the screen angles if you are experienced in producing half-tone separations.

Some typesetting machines can run special software that recalculates the screen angles to avoid moiré patterns. This software is called *HQS* (high-quality screening) or similar names. Note that pages take much longer to print with HQS (uo to ten times longer) and, if you use a typesetting bureau, often attracts an extra charge.

If you want to change a screen angle, click on the colour name and then edit the value in the *Screen angle* field.

As a footnote:

The recommended angle for yellow is 0° which is horizontal. This is not a problem as the eye is least responsive to yellow and so does not detect the horizontal and vertical orientation.

⑨ Reflect page

Pages are printed as mirror-images. This is useful for producing typeset film for printing plates.

2.5 Effects

This section covers:

- what are Effects?
- using Effects

Related sections of this manual:

- 2.6 Styles
- 2.7 Rulers

What are Effects?

To change the appearance or alignment of the text in Impression, you can apply one or more **Effects**. For example, you may want larger characters so you would choose a larger font-size. You may want the characters to have a different typeface so you would change the font.

Either action applies an ***Effect***; applying a different font size is one Effect, a different font is another Effect. Some Effects can be combined; a section heading might be a combination of two Effects: (1) a bolder font and (2) a larger font size.

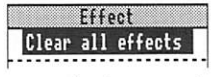
Effects and the cursor

When you are typing in text, you can apply or cancel Effects at the cursor and then continue typing. To change an Effect, choose the required option from the *Effects* menu or the Toolbar. If the Effect is already applied, its name on the menu is ticked;

Bold Effect is applied at the cursor

To cancel the Effect, click on the name; it becomes unticked.

You can apply or cancel several Effects at once. For example, to create a headline you might press *Return* to start a new line and then select a new font, a larger font size, and centre-justification. You then type in the headline. To cancel all three Effects at once, choose *Clear all effects* from the menu.



If you want to continue with the new font but revert to normal font size and alignment, cancel only those two Effects

To apply or cancel Effects you can use either **Select** or **Adjust**.

- If you use **Select**, the change is made and the *Effects* menu disappears from the screen.
- If you use **Adjust**, the change is made and the menu remains on the screen. This is useful if you want to make a number of changes. In most places in Impression, you can make several changes using **Adjust** to keep the menu or dialogue box on the screen.

Effects and existing text

Before you can change which Effects are applied, you must first select the region of text that you want to change. Selecting regions of text is described in *2.3 Text handling.*

When the *Effects* menu is displayed, any Effect which is used anywhere within the selected region has a tick against its name.

Bold Effect is used in the selected region

You could have several Effects in the same group ticked. For example, this page uses two different font sizes and four fonts. A tick just means that the Effect has been used *somewhere* in that region, not necessarily over the entire region.

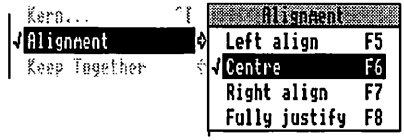
To remove all Effects, choose *Effect ⇒ Clear all effects.*

This option removes:

- character-based effects (such as *font* or *size*) from the cursor or selected region, and
- paragraph-based effects (such as *alignment*) from the entire paragraph. Any selected region is automatically extended to cover the entire paragraph.

This option does not clear any Styles that may also be applied. See *2.6 Styles.*

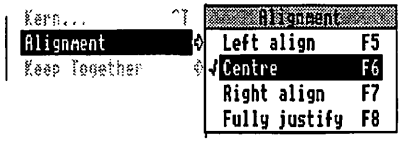
If you want to remove an Effect from the entire selected region, click on its name in the menu.



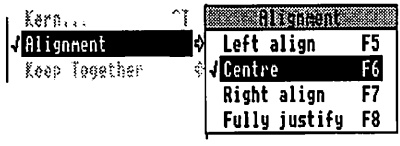
*Click on **Centre** to remove the Effect*

Its name is then no longer be ticked.

Similarly, to apply an Effect over the entire selected region, click on its name. A tick appears against the name. If the Effect is used anywhere in the region, its name is already ticked on the menu. In this case, click once to remove the Effect from those areas of the text where it is currently used:



and then click a second time to apply it over the entire region:



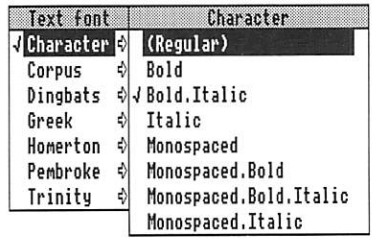
The Effects menu

Clear all effects

This removes all Effects from the cursor or selected region. It does not remove any Styles that may also be applied.

Text font

You can also apply this Effect from the Toolbar:



The list is displayed in two parts:

- First, the font family names (*Corpus, Greek, Homerton*, etc.). The currently selected font family is ticked. Slide over the arrow to the right of the required name to display:

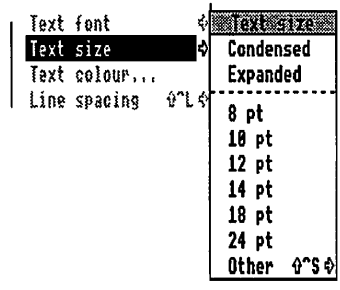
- Second, a submenu of the font variants (*Regular, Bold, Bold.Italic*, etc.). The currently selected font variant is also ticked.

Clicking on the font family name chooses the *Medium* or *Regular* font variant.

The Character font (described in *2.3 Font handling*) is for documents that are to be printed as pure text in draft-mode (see the *2.4 Printing* for details). Unlike the other fonts, it is unsuitable for high-quality printing.

Text size

This lets you change the width and height of characters. You can also apply this Effect from the Toolbar: 12pt



Condensed makes characters narrower (like this). They are condensed to 70% of their original width.

Expanded makes characters twice their original width (200% – **like this**).

The other entries change the height of text (72 pt = 1 inch):

sample text in 8pt

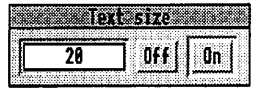
sample text in 14pt

sample text in 24pt

You can also change the font size from the keyboard. *Ctrl-Shift-Y* decreases the font size; *Ctrl-Shift-T* increases it.

Line spacing is set by underlying styles (such as *Normal*). Conventionally, line spacing is 120% of the font size but you can change this if required.

You can also type a font height into the *Other* editable field. (This has a keyboard short cut of *Ctrl-Shift-S*):



On applies the font height to the cursor or selected region.

Off removes any font height effect from the cursor or selected region.

Text colour

This controls the colour of the characters which is, by default, black. It displays the Colour Picker. See *2.12 Colour handling* for more information.

Line spacing

(*Ctrl-Shift-L*) This lets you specify the distance between lines of text:

These two lines of text are in 10pt
with 12pt line spacing.

These two lines of text are also in 10pt

but with 16pt line spacing.

These two lines of text are also in 10pt
but with only 9pt line spacing.

If you want to set a line spacing less than the current value, apply the line spacing Effect to the complete line. (The default line spacing is 120% of the current font size.)

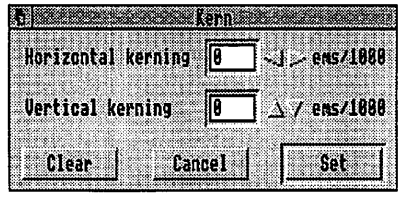
We suggest you always apply line spacing effects to complete paragraphs. This helps to maintain a consistent appearance to your document.

Kerning & Tracking

The menu option reads
Kerning when there is a cursor in the text,
Tracking when there is a selected region.

There is a keyboard short cut of *Ctrl-T.*

Kern effects option



Horizontal kerning adjusts the space between two characters:

AW AW AW

Left to right: no kerning, positive kerning, negative kerning

Vertical kerning moves the baseline of the right hand character of a pair of characters (and subsequent characters on the line):

AA AA AA

Left to right: no kerning, positive kerning, negative kerning

Kerning is measured in ***ems***. One ***em*** is equivalent to the size of a capital **M** in the current font, so kerning is always proportional to size of the text. The dialogue box expects values to be entered in 1000ths of an em, so entering a value of ***1000*** in the horizontal field moves the two characters apart by one em. Values can be positive or negative.

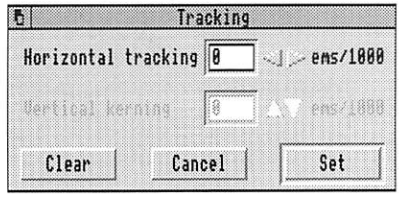
Vertical movements occur at the cursor position. Unless you want the rest of the characters on the line to be moved up by the same amount, it is usually necessary to place an equivalent kern down later in the line.

Set applies the kern. *Cancel* simply cancels this operation and removes the dialogue box. *Clear* clears any kerning set at the cursor.

Displaying the *Kern* dialogue box while the cursor is between two previously kerned characters shows the current kern values. You can then alter or remove (with *Clear*) any existing kern values. (Kern characters are invisible characters in the text. You can also delete them using the normal delete keys.)

There are key short cuts for kerning. (You do not need to display the dialogue box.) *Ctrl-E* and *Ctrl-R* extends or reduces the gap between two characters while *Ctrl-U* and *Ctrl-J* moves the next character up or down. In all cases one press of the key alters the kern value by $^{50}/_{1000}$ (0.05 em).

Tracking



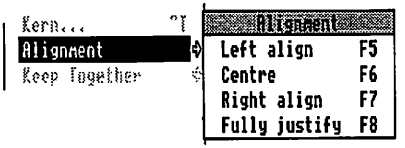
This is similar to horizontal kerning except that it applies to a selected region of text. Values can be positive (move the characters apart) and negative (move them together). The keyboard short cuts *Ctrl-E* and *Ctrl-R* increase and reduce the tracking (each key press alters the tracking by 0.01 em). Tracking is typically used to spread text in headings.

An example of its use:

TRACKING	no tracking
TRACKING	0.1em ($^{100}/_{1000}$) tracking
T R A C K I N G	0.5 em ($^{500}/_{1000}$) tracking

If you output this document to a PostScript file:
Applying tracking to a large area of text can create very large PostScript files.

Alignment



Keyboard short cuts:
F5 for *Left align*,
F6 for *Centre*,
F7 for *Right align*,
F8 for *Fully justify*.

F5 means just the function key – you do not need to press *Ctrl* or *Shift*.

You can also apply these Effects from the Toolbar:

Left to right – left, right, centre, fully justified

Impression always applies *Alignment* Effects to the entire paragraph even if just a part of the paragraph is selected.

Examples of alignment:

Text in this paragraph is ***left-aligned*** and so has a ragged margin on the right-hand side. This is normally how you lay out letters as it gives a less formal appearance to your documents. Left-aligned is also called ***left justified*** or ***ragged-right.***

Text in this paragraph is ***centre-aligned*** and so has ragged margins on both sides. This is often used in posters and simple leaflets. You may need to adjust the text margins to avoid a short final line (like this paragraph).

Text in this paragraph is ***right-aligned*** and so has a ragged margin on the left-hand side. It has limited uses but can be effective to the left of illustrations. Right aligned is also called ***right justified*** or ***ragged-left.***

Text in this paragraph is ***fully justified*** and so has an even margin on both sides. It gives a formal appearance to a document. (Most of the text in this manual is fully justified.) The even margins are created by increasing the spacing between words.

Keep together

These Effects control if and how paragraphs break over frame boundaries. They always control complete paragraphs, even if you apply them to just a part of the paragraph.

Paragraph

This ensures that the whole paragraph appears in the same frame and does not split at a frame boundary.

Paragraphs

Normally you would apply this to a region of several paragraphs.

It ensures a group of paragraphs always appear in a single frame and do not split over two frames.

With next

This ensures that the whole of this paragraph and the following paragraph appears in the same frame.

A common use is to stop a heading appearing at the bottom of one frame with the text to which it applies at the top of the next frame.

Ruler

This option is ticked if there is a local ruler at the cursor or in selected region. Clicking on *Ruler* removes the local ruler. (Rulers are described in *2.7 Rulers.*)

Bold

Keyboard short cut *Ctrl-B*. You can also apply this Effect from the Toolbar:

This applies the **Bold** or, if this does not exist, the **Demi** variant of the current font. If neither variant exists, text is unchanged.

Applying *Bold* to a region containing two or more fonts applies the appropriate fonts:

This is Trinity medium font and this is Homerton medium.

Applying *Bold* to all the text gives you:

This is still Trinity and this is still Homerton but now the Bold variants.

If you later change the font, the Bold Effect is applied to the new font. So if you apply *Bold* to some Trinity text:

This is some sample text.

and later change it to Homerton, the result is Homerton.Bold:

This is some sample text.

Italic

Keyboard short cut *Ctrl-I*. You can also apply this Effect from the Toolbar:

This is similar to *Bold*. It applies *Italic* or *Oblique* font variants (if these exist).

You can combine *Italic* and **Bold** to give ***Bold.Italic text*** (if a suitable font variant exists).

Underline

Keyboard short cut *Ctrl-Shift-U*. You can also apply this Effect from the Toolbar:

This underlines text (like this). The position and thickness of the underline is set by underlying styles (such as *Normal*).

(Refer to the description of underline in the Style Editor *Text* dialogue box in *2.6 Styles.*)

Underlining is rarely useful for emphasis. You will find emphasising text using *Bold* or *Italic* generally look better when printed.

Superscript

Keyboard short cut *Ctrl-Shift-J.*

This displays text in superscript (like this). The position and size of superscript characters is set by underlying styles (such as *Normal*). (Refer to the description of superscript in the Style Editor *Font* dialogue box in *2.6 Styles.*)

Superscript 1, 2, 3 (¹ ² ³) are available directly from the keyboard. (Characters 185, 178, 179 or *Alt-1* to *Alt-3*. Not all fonts include these characters.)

Subscript

Keyboard short cut *Ctrl-Shift-K.*

This displays text in subscript (like this). The position and size of subscript characters is set by underlying styles (such as *Normal*). (Refer to the description of subscript in the Style Editor *Font* dialogue box in *2.6 Styles.*)

2.6 Styles

This section covers:

- what are Styles?
- using Styles
- when to use Effects and when Styles
- the Style Editor
- creating grids, tables etc.

Related sections of this manual:

- 2.5 Effects
- 2.7 Rulers

What are Styles?

A style is a named collection of ***effects*** and text markers.

Some effects (such as font and alignment) duplicate options on the Effects menu; others (such as paragraph rules) are unique to Styles. All text has at least one Style applied to it – the default or *Normal* Style. This defines all possible effects. You can then overlay *Normal* with other Styles, Effects and Rulers to alter the appearance of your document.

For example, section headings in this manual are 18pt Homerton Bold. Because this combination is frequently used, the two Effects are grouped together in a Style. Whenever a new section heading is required, this Style can be applied to it. The heading then appears with the required combination of Effects. Applying a style is also quicker than applying several effects.

All Styles are named; we call the Style for section headings ***Heading***. The name can show its use ("*Heading*") or its appearance ("*Green italic*"). Impression has several Styles already defined but you can modify these if required as well as create totally new Styles.

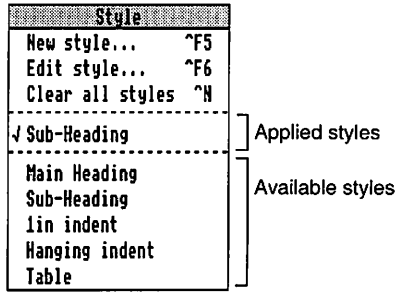
A further advantage of Styles is that if you change them, all text in that Style automatically the changes. For example, if we changed *Heading* to 20pt, every section heading in this manual would automatically change to 20pt.

The Style menu

The *Style* menu gives access to editing existing Styles, creating new Styles and applying and removing Styles from the cursor and regions of text. It also shows which Styles are currently applied to the cursor or region of text.

You can choose the *Style* menu either from the Main Menu or from the toolbar

.



An example Style menu

New style...

(*Ctrl-F5*) This displays the Style Editor ready for you to create a new Style. The Style Editor is described later.

Edit Style...

(*Ctrl-F6*) This displays the Style Editor ready for you to edit or examine an existing Style. The Style Editor is described later.

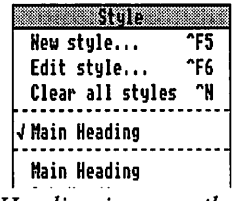
Clear all styles

(*Ctrl-N*) This removes all Styles (except *Normal*), Effects and Rulers applied at the cursor or over the selected region.

The applied Style list

The second section tells you which Styles (other than *Normal*, which is applied underneath all Styles and Effects) are currently applied at the cursor or selected region. Applying and removing Styles is described later.

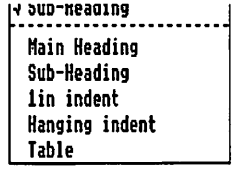
Currently applied styles are ticked:



Main Heading is currently applied

If there is a selected region, this list tells that a Style is used over some ***part*** of that region, not necessarily the ***entire*** region.

The Style list



Sample Style list

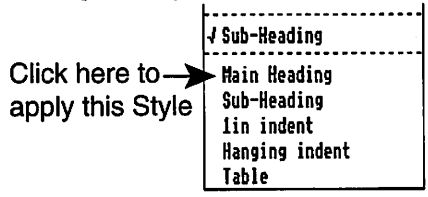
The last part of the menu lists Styles available in this document. Usually this is a full list of Styles. However, the Style Editor (described later) allows you to exclude selected Styles from the list. (The *Show on style menu* option.)

Using Styles

Applying Styles

To apply a Style to a region of text, first select the region. (Some Styles automatically apply to whole paragraphs – this is controlled by *Automatic paragraph apply* in the Style Editor. For such Styles you can select any part of the paragraph.)

Then choose the required Style from the Style list.



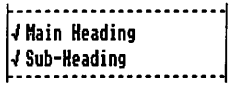
Applying the Style to a selected region applies it over the entire region even if the Style was previously applied to a part of the region.

Style changes at the cursor only apply if you type something. However, if you move the cursor using the mouse or the arrow keys, the change is forgotten. If you return to the original position and start typing, the Style change is not applied to your typing.

As with most menu operations, **Select**-clicking applies the Style and removes the menu. **Adjust**-clicking applies the Style but does not remove the menu. This lets you make further changes.

If you apply conflicting Styles the last applied Style takes precedence. For example, if you apply a Style that sets text to 18pt then a Style that sets 24pt, the second Style (24pt) applies.

If there is a cursor, the Style list shows the order in which Styles were applied (latest at the top of the list):



Sub-Heading was applied first followed by *Main Heading*. Effects set by *Main Heading* take precedence over the same effects defined in *Sub-Heading*. The resultant text is controlled by effects set by *Main Heading* and non-conflicting effects in *Sub-Heading*.

If there is a selected region, the order of Styles in the list has no significance.

The merits of when to use Effects and when to use Styles are described later in *Effects & Styles*.

Overlaying Styles

More than one Style can be applied to any region of text. So, for example, a Style that sets the text colour to green can be applied to a region of text that already has a Style that italicises the text. The visible result is italic, green text.

If you overlay two Styles that set conflicting effects, the last applied Style take priority. For example, if the existing Style uses Trinity font:

Here is some sample text.

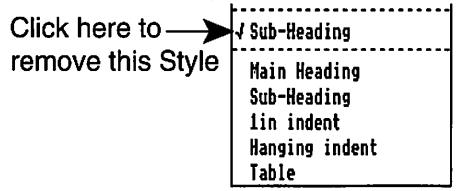
and you overlay it with a Style that uses Homerton font, the text now appears in Homerton font:

Here is some sample text.

A Style does not have to visibly change text. An example is a Style that marks text for inclusion in an index. This might just set the *Index label* attribute.

Removing a Style from the text

Click on the Style name in the applied Style list to remove it from the cursor or selected region of text.



Removing a Style at the cursor (unless it is paragraph-based; that is, *Paragraph apply* is set) only takes effect if you type something. If you move the cursor without typing, the change is forgotten.

Modifying Styles

The power of Styles is that you can modify them and the modification applies to all text that uses that Style. You can use either:

- the Toolbar, or
- the Style Editor (described later).

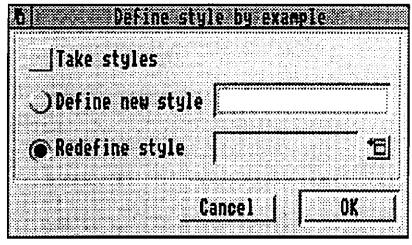
Using the Toolbar

1 Create some text with the required Effects, Styles and Rulers applied.

2 Position the cursor in that text.

3 Click on the *Define* button on the Toolbar:

This displays a dialogue box:



4 The modified style always includes applied Effects and any local ruler in the example of text.
Click on *Take styles* to also include any applied Styles.

5 Click on *Redefine style*.

6 Click on the menu icon to display a list of Styles.

7 Choose the Style.

8 Click on *OK* to modify the Style. This applies the Style to the text example and removes any applied Effects.

Creating a new Style

You can either:

- Choose *Style* ⇒ *New style*. This displays the Style Editor. You can then set effects as required or merge effects from existing Styles or from the cursor. See *Style Editor* for more information.
- Use the Toolbar. This is similar to modifying a Style. That is, you apply the required Effects, Styles and Rulers to some text and then display the *Define style by example* dialogue box. Select *Define new style* and type a name into the editable field. Click on *OK*.

Deleting an unwanted Style

1 Display the Style Editor.

2 Click on *Delete*. (An Alert box warns you if the Style is used anywhere.)

Creating tables, grids, etc.

Impression lets you create tables and grids using:

- rules-offs – these are lines drawn above and below lines of text,
- vertical rules – these are vertical lines drawn to connect to the rule-offs,
- line spacing and rule-off offsets – used in combination, they let you join or separate the other elements of table drawing.

Rule-offs and their associated offsets are described in the Style Editor section under *Rules dialogue box.*

Vertical rules are also described under *Rules dialogue box.* Placing the associated Vertical rule tabs (which specify where to draw vertical rules) is described in 2.7 *Rulers.*

Line spacing is controlled either using Effects or in the *Text* section of the Style Editor.

Here are a few hints when using these features:

- A table often looks better with a wider than normal spacing between lines of text. To do this, increase the *Line spacing* value.
- To move an entire table up or down relative to the text, alter only the *Below text offset* value. (Negative values move the table downwards.)
- To draw boxes using rule-offs and vertical rules, type a negative value into the *Above text offset.* This leaves a gap between the two rule-offs. Separate the boxes using blank lines in a Style with no rule-offs set.
- To draw sidebars against a paragraph (as this paragraph has), create a special Style with
  - a ruler with one or more vertical rules,
  - the *Vertical rule width* button on, and
  - a *Vertical rule width* other than *0.*

An alternative is to use *TableMate*, the OLE utility supplied with Impression. This can create two types of table:

- a 'DDF' text file that uses a combination of vertical and horizontal rules, or
- a graphic table that uses the OLE mechanism to display and edit the table.

Effects & Styles

This section provides guidance as to when to use an Effect and when to use (or create) a Style. In many cases it is obvious which is better but there is a grey area where the two overlap. Often the decision will be on personal preference.

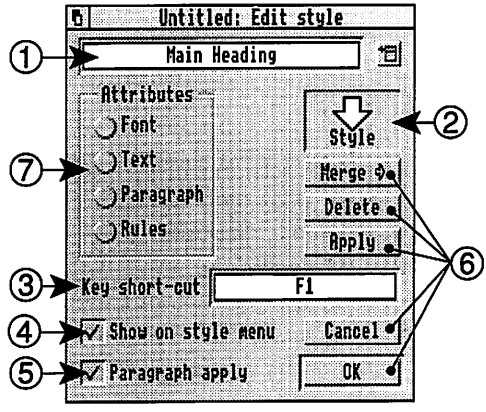
- If you want to make a simple change, such as centre justify some text, then use the Effect provided rather than create a new Style.
- Some changes cannot be made using Effects such as setting rule-offs or background colour. For these changes you must create a Style.
- If you are producing a simple document, for example a letter, it is easier to use combinations of Effects. If you want to change the application of an Effect, this is reasonably quick in a short document.
- If you are producing a long document, using Styles rather than combinations of Effects is easier. You can alter a Style and all text in that Style changes to reflect the Style alteration. The heading at the top of this page (Effects & Styles) is in the Style *Main heading*. We wouldn't use a combination of Effects (*24pt* and *Homerton Bold*) because *Main heading* is used so often in this document. If we wanted to change to, say, *22pt*, it would be tedious to go through the manual and change every example.
- If you are producing a template document that will be used to produce other documents (for example, a basic newsletter layout document), then creating a range of suitable Styles helps to maintain a consistent appearance to documents produced from it. You need a good memory

to remember that main titles are always in 20pt, centre-justified Homerton Medium and subtitles in 16pt Trinity Medium Italic. It's a lot easier to create suitable Styles and give them the names *Title* and *Sub-Title*. You will then know later what their use is.

Style summary

- A Style sets only certain stylistic effects. Effects not set by a Style take their appearance from the Styles and Effects applied earlier to the text.
- A Style may be applied by choosing its name from the Style List (the bottom section of the Style menu).
- A Style may be cleared (turned ***off***) from the selected region by choosing its name from the Applied Style List (the central section of the Style menu).
- One or more Styles may be turned ***on*** or ***off*** using **Adjust** – this retains the menu on the screen.
- If there is a selected region – pressing the Style short cut key applies the Style over this region if it does not occur anywhere within the region. If the Style already occurs within the region then it turns it ***off***.
- If there is a cursor – pressing the Style short cut key turns that Style ***on*** at the cursor if it is currently ***off***, and turns it ***off*** if it is already ***on***.
- Styles currently applied at the cursor (and the order in which they were applied) are shown in the current Style list.
- The Styles that occur in a selected region are also shown on the current Style list. (No information can be inferred from the order of the list.)

The Style Editor



This dialogue box is displayed when you create or change Styles. While the Style Editor is on the screen you can continue to edit the document.

When you edit an existing Style you are actually working on a copy of the Style. Any changes you make are not applied to the document until you click on either the *Apply* or *OK* button. If you want to quit the Style Editor and leave the original Style unchanged, you can click on *Cancel*.

Similarly, if you are creating a new Style, it is not copied into the document until you click on *Apply* or *OK*. Therefore, if you decide you don't need the Style you are creating, click on *Cancel* and the document is unchanged.

① Style name

This shows the name of the Style currently displayed in the Style Editor. To change to a different Style either

- click on the menu icon to the right or
- click **Menu** on the editable field

and choose from the menu.

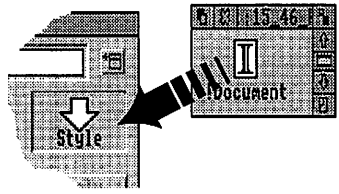
If you click using **Adjust**, this menu remains on screen and you can browse through several Styles.

If you want to change the name of the currently displayed Style, click in the editable field and edit the name. Style names can be up to 31 characters long and you can use any character including *Space*.

If you are creating a new Style, you can either change it by typing in a new name or let the Style Editor assign it a name when it is copied into the document. Automatic Style naming is described later.

② Loading Styles

Dropping an Impression document from a directory window onto this target adds Styles from that document into the current document.



This is useful for loading pre-prepared Style templates. For example, a blank document could be created that has one or more new Styles defined. If this is then saved, it can be used as a '*Style file*' and loaded into other documents.

③ Key short cut

This lets you apply and remove the Style using the keyboard. Click in the field and then press the required combination of keys. You can use ***a-z*** in combination with *Ctrl* and *Shift* and *F1-F12* directly or with *Ctrl* and *Shift*. (We do not recommend *F12* as this is used by RISC OS.)

For example, if you click in the field, hold down *Shift* and press *F9*, *Shift-F9* appears in the field. After you click *OK*, whenever, you press *Shift-F9*, you select or remove this Style. Note that using a key combination for a Style over-rides any

existing use. In the example, *Shift-F9* no longer selects 90% scaling (its normal use).

To remove a short cut, display the Style, click in the field and delete the contents. (*Ctrl-U* is a quick way to do this.) Click *OK* to implement the change.

④ Show on style menu

When this switch is set, the *Style name* appears on the Style list.

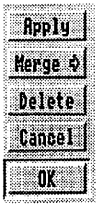
Not showing a Style reduces the length of the Style list. However, you can then only select the Style by using the key short cut or clicking *Apply* in the Style Editor.

⑤ Paragraph apply

Select this option to apply the Style to entire paragraphs. (A paragraph ends when you press *Return*. Therefore, a paragraph, in Impression terminology, can be as short as a single line.)

Selecting any of the paragraph-based options (such as *Space above paragraph*, described later) automatically selects this option.

⑥ The action buttons



These are the buttons on the right of the Style Editor window.

If you click **Select** on any of these, the selected action takes place and the dialogue box is removed from the screen.

If you click **Adjust** on any of these, the selected action takes place but the Style Editor remains on screen so that other changes can be made. This is useful if you are trying out changes and want to see how they look. You only see a change if some text in that style is displayed in the document window.

Apply

This applies the Style to the selected region or to the cursor. It is a quick way of defining or modifying a Style and applying it to a selected region.

The Style, complete with any changes, is copied into the Style list as if you had clicked on *OK*.

Merge

You can merge the information in the Style Editor with either an existing Style or the combination of Styles and Effects set at the cursor. This operation is described later in *Merging Styles*.

If you click this button by mistake, remove the menu by clicking on another part of the *Style Editor* dialogue box.

Delete

Use this to delete an unwanted Style. An Alert box warns you if the Style is used in the document.

Cancel

Click on this to cancel any changes you have just made to the Style. If you are creating a new Style, the Style is discarded as it does not currently exist in the document.

If you are editing a Style, clicking **Adjust** on this button discards any changes you have made and then copies the existing version of the Style from the document into the Style Editor again.

OK

Pressing *Return* has the same effect as clicking on this button.

If you have created a new Style, it is added to the Style list.

If you have edited an existing Style, the changed version overwrites the old version of that Style. Any text in that Style changes to reflect your alterations. This reformatting can take several seconds for a long document.

⑦ Text & Paragraph

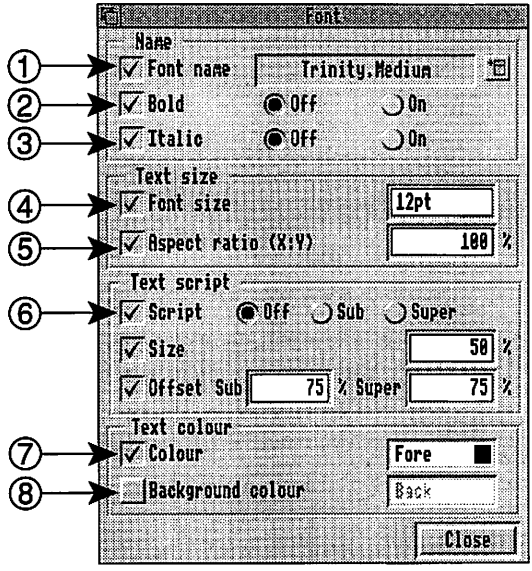
These display dialogue boxes that let you alter the effects that are set by this Style..

All effects have a switch to their left:

- If the switch is ***off***, the effect is not defined in this Style (it is 'don't care'). That effect is then controlled by other Styles already applied to the text (such as *Normal*).
- You can only select or set a value for an effect if its switch is ***on***. Where you can type in a value (such as font size) you can use any of the units recognised by Impression. (These are listed in *Appendix 3. Using dialogue boxes.*) The displayed units (by default points, ***pt***) can be changed – see *2.16 Customising Impression* for details.

Font dialogue box

This controls effects that apply to individual characters such as the font, character size and colour.



① Font name

This acts in the same way as the *Text font* Effect – see *2.5 Effects* for details.

② Bold

This acts in the same way as the *Bold* Effect. It applies the ***Bold*** font variant (or ***Demi***, if there no Bold variant) to text to which it is applied. If neither variant exists, the text is unchanged.

If you wanted this Style to use a specific bold font you would normally set *Font name* to use that font directly. You would normally use *Bold* to select the bold equivalent of the current font. (See the description of the Bold Effect for more details.)

③ Italic

This acts in the same way as the *Italic* Effect. It applies the ***Italic*** or ***Oblique*** variant of text to which it is applied. Fonts which do not have these variants are unchanged.

④ Font size

This acts in the same way as the *Text size* Effect.

The font size is the size of the characters. It is usually measured in *points* (*pt* – 72pt = 1 inch).

⑤ Font aspect ratio (X:Y)

This controls the relative width of characters. It is a percentage and so does not have any units.

As an example, an aspect ratio of 50% displays characters at half their normal width. The height of the characters is unchanged.

⑥ Script

Off - characters are displayed at their normal height,

Sub - characters are displayed in a smaller font size and in the subscript position; thus, $_{1\,2\,3}$. This acts in the same way as the *Subscript* Effect. (The size and position are controlled by the *Size* and *Offset* fields described below.)

Super - characters are displayed in a smaller font size and in the superscript position; thus, $^{1\,2\,3}$. This acts in the same way as the *Superscript* Effect.

The line spacing is unchanged.

Size

This specifies the size of subscript and superscript characters relative to the current font size. For example, *50%* sets subscript/superscript characters to half the current font size. Note that you can set *Size* independently of *Sub* and *Super*. This provides extra flexibility for specifying subscript and superscript characters.

A value of *0* has a special meaning. Subscript and superscript characters then appear in the default values that applied to previous versions of Impression (such as Impression II or Impression Junior) that had fixed values for size.

Offset

This is similar to *Size* (described above). These fields specify the offset of subscript and superscript characters from the baseline. For example, for 12pt text, a value of *50%* offsets the subscript or superscript characters by 6pt.

Like *Size*, a value of *0* uses the same default offsets as previous versions of Impression.

To maintain a consistent look to your document, you often define *Size* and *Offset* in *Normal* Style but set *Script* to ***off***. Other Styles can then set *Sub* or *Super* ***on*** and use the settings for *Size* and *Offset* defined in *Normal* Style

⑦ Colour

This controls the colour of the characters which is, by default, black. Click on the colour icon to display the Colour Picker (described in *2.12 Colour handling*).

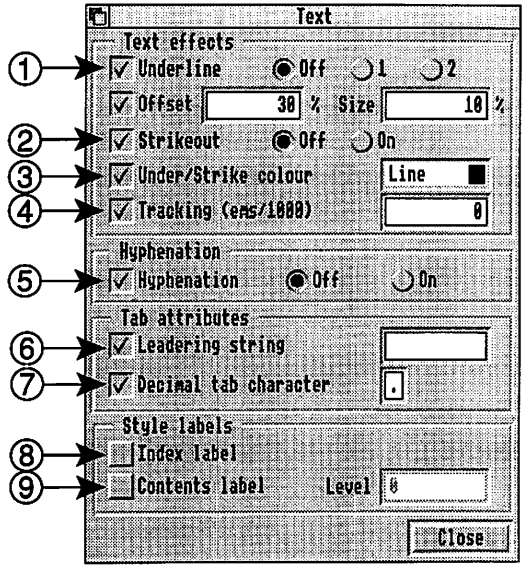
⑧ Background colour

This defines the colour of the background on which the text is displayed. Click on the colour icon to display the Colour Picker (described in *2.12 Colour handling*). It is unusual to set a background colour.

Technical note: the font manager's anti-aliasing tries to anti-alias between the font background and the font foreground colours.

Text dialogue box

This controls effects that usually apply to areas of text rather than individual characters.



① Underline

Off - no underline is drawn.

1 - a single line is drawn under text in this Style (like this). This acts in the same way as the *Underline* Effect.

2 - a double line is drawn under text in this Style.

Offset

Offset is the position of the underline relative to the character baseline. Size specifies the thickness of the underline. In both cases, the value is relative to the current font size. *0* selects the same default values used in previous versions of Impression.

For flexibility, you can specify *Offset* independently of applying an underline. Often you define *Offset* in *Normal* Style but set *Underline* ***off***.

② Strikeout

When this attribute is ***on***, a single line is drawn through the characters (~~like this~~). The line is drawn in the *Under/Strike colour.*

③ Under/strike colour

This controls the colour of the underline and strikeout lines. You could create a Style that sets only this one attribute (although it would probably not be very useful).

④ Tracking

This lets you change the spacing between characters. Specify the extra space between characters in $^{1}/_{1000}$ths em.

sample text with no tracking

sample text with $^{200}/_{1000}$ ths em tracking

If you output this document to a PostScript file:
Applying tracking to a large area of text can create very large PostScript files.

Note the difference between ***tracking*** and ***kerning***. ***Tracking*** changes the horizontal spacing between groups of characters. ***Kerning*** changes the spacing between individual pairs of characters. ***Kerning*** can also change the vertical alignment between a pair of characters.

⑤ Hyphenation

This turns on or off the automatic hyphenation. For hyphenation to work, the hyphenation module must be loaded; see *Hyphenation* in *2.14 Spell checking and the dictionaries* for more details.

Selecting ***on*** automatically loads the hyphenation module if this is not already loaded.

⑥ Leadering string

The leadering string can be from one to four characters long and contain any printable character. This string is drawn by Impression whenever it meets a tab character in text with this Style applied. The space between the tab character and the next tab position on the current ruler is filled with the leadering string. A commonly used string is three full stops and a *space* ('... ... ... ').

Its most common use is in contents pages to draw the eye across to the page numbers.

⑦ Decimal tab character

This is the character that decimal tabs align numbers or text to. You can use any single character such as

. , · ± (12.3 12,3 12·3 12±3)

(Centre decimal point is character 183, ± is character 177.)

Tabs are described in *2.7 Rulers*.

Style labels

Style labels are not true effects because they do not change the format of the text. They mark text for inspection by the index and contents compilers. Any text with these effects set will be found by the compilers even if they are overlaid by other Styles that do not have this attribute set. See *2.15 Contents and index generation* for more details.

⑧ Index label

This marks text that is to appear in the index. Normally you create a Style that has only this attribute set and apply it to appropriate words or phrases.

It is sometimes useful to set the background colour so that you can see which text has this attribute set. Remember to reset the background colour before printing anything.

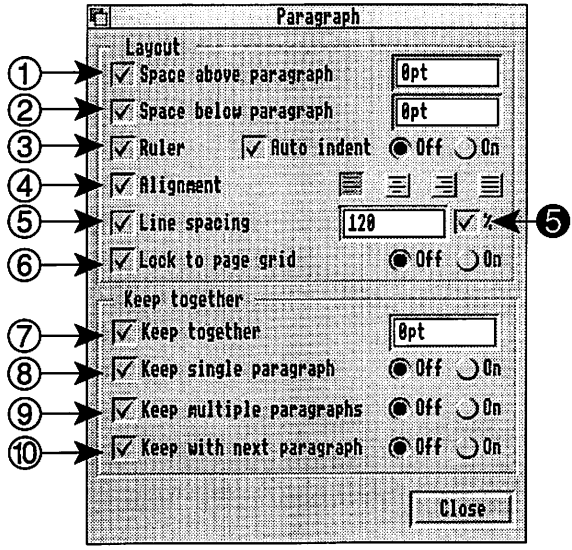
⑨ Contents label

This marks text that is to appear in the contents list. Typically, the Styles used for main headings and sub-headings have this attribute set so that they are automatically included in the contents list.

See *2.15 Contents and index generation* for details of using *Level*.

Paragraph dialogue box

This controls effects that are normally applied to complete paragraphs. Selecting any of these effects, sets the *Paragraph apply* button on the main Style Editor dialogue box.



① Space above paragraph

This sets the amount of extra space inserted above a paragraph. Set *0* if you do not want any extra space.

Typically you would use this to insert extra space above headings.

② Space below paragraph

This is the amount of extra space inserted below a paragraph. (A paragraph ends when you press *Return*.)

If you want a blank line below each paragraph, set *Space below paragraph* to the same value as the line spacing. Using *Space below paragraph* avoids the chance of a blank line at the top of a frame as can happen if you type an extra *Return* character at the end of each paragraph.

If you do not want any extra space below a paragraph, set *Space below paragraph* to *0*.

③ Ruler and Auto-indent

Click on *Ruler* if you want to associate a ruler with this style. That is, if you want this Style to set different tabs and margins. Click on *Auto-indent* if you want text in this Style to auto-indent from the current ruler. Rulers and auto-indenting are described in *2.7 Rulers*.

④ Alignment

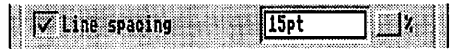
This acts in the same way as the *Alignment* Effect. Refer to that description for examples of the four types of alignment.

⑤ Line spacing

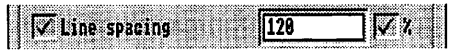
This acts in the same way as the *Line spacing* Effect. It is the space between the top of one line of text and the top of the next line. This is often called *leading* from the strips of lead traditionally used when setting metal text.

You can define line spacing as:

- An absolute value. For example, *15pt*. If you later change the text size, the line spacing does not change. To enter an absolute value, clear the % button (⑩).



- A percentage of the current font size. For this set the % button (⑤). If you later change the text size, line spacing automatically adjusts to suit the new value. Traditionally line spacing is *120%* of the current font size.



Examples:

This block of text shows the effect of line spacing.	*10pt text; 10pt line spacing*
This block of text shows the effect of line spacing.	*10pt text; 12pt line spacing (120% spacing)*

This block of text	*10pt text; 16pt line spacing*
shows the effect	*(160% spacing)*
of line spacing.	

A spacing of *0* has a special meaning. Any text using this spacing does not affect the line spacing. This is useful if you want to include some large text in the middle of a line without affecting the line spacing. For example:

> Without defining the line spacing, the words "large text" move the middle line down. large text. This gives an unbalanced look to the paragraph.
>
> In this paragraph "large text" has a line spacing of 0. This retains the existing line spacing. large text. The paragraph now has even spacing between the three lines.

A common use for large text is including the *Dingbats* telephone symbol (character 37) in a line of text. This is a small character and looks better in a larger font size:

☎ 0442 63933 (☎ and text at 10pt)

☎ 0442 63933 (☎ at 14pt) (To get the telephone symbol level with the number, we kerned the number up slightly. The second telephone symbol shows the result without kerning.)

⑥ Lock to page grid

On complex, multi-column documents, you often want to ensure that lines of text are aligned across the columns.

With this option selected, lines of text lock to an invisible grid covering the entire page. The result is that any text in a Style with this grid-lock attribute set always aligns across columns regardless of where the tops of the frames are positioned or what text occurred before or what objects occur over the frames.

Lock to page grid overrides the current line spacing value.

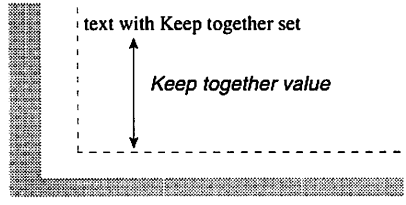
The *Alter master page* and *New master page* dialogue boxes let you specify the grid spacing. Refer to *2.10 Master pages* for more information. Note that only *Y offset & spacing* affects text.

Show flow on the Icon Bar Menu or the Toolbar displays the grid.

⑦ Keep together

Often the bottom of a frame splits paragraphs across two frames. Documents look better if you avoid having only the first line of a paragraph at the bottom of a frame. (The technical term is an ***orphan***.) *Keep together* lets you avoid this.

If the first line of a paragraph is closer to the bottom of the frame than the *Keep together* value, the text moves to the start of the next frame.



The value entered is the distance from the bottom of the line. So, for example, if you want to keep the first two lines together, make *Keep together* equal to the line spacing. If you want to keep three lines, make *Keep together* equal to twice the line spacing.

⑧ Keep single paragraph

This acts in the same way as the *Keep together ⇒ Paragraph* Effect. (See *2.5 Effects* for details.) It ensures that the whole paragraph appears on one page and is not split across a frame boundary.

⑨ Keep multiple paragraphs

This acts in the same way as the *Keep together ⇒ Paragraphs* Effect. (See *2.5 Effects* for details.) It ensures that a group of paragraphs appears on one page and is not split across a frame boundary.

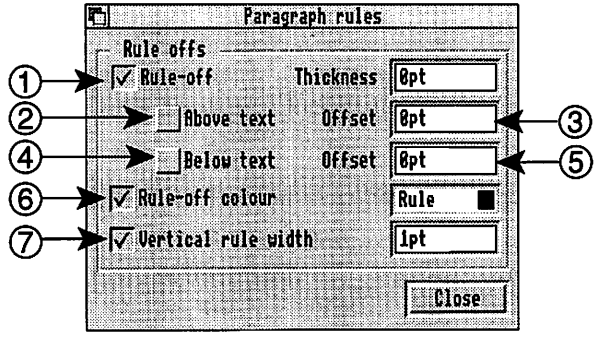
⑩ Keep with next paragraph

This acts in the same way as the *Keep together* ⇒ *Next* Effect. (See *2.5 Effects* for details.) It ensures that this paragraph and the following paragraph always appear together on the same page and do not split across a frame boundary.

Its main use is to prevent headings appearing as the last line on a page. *Keep with next*, applied to a heading Style, ensures the heading is kept with the body of the paragraph.

Rules dialogue box

This part of the Style Editor controls Rule-offs and Vertical rules. For more details on using these to create tables and grids, refer to *Creating tables.*



A rule-off is a horizontal line drawn whenever a *Return* (end of paragraph) is met in this Style. Rule-offs can be drawn either above and below the text or in just one of these positions.

Note the difference between ***rule-offs*** and the ***underline*** effect. ***Underline*** only draws a line under those characters where the attribute is set. ***Rule-offs*** are drawn between margins only when a *Return* character in this Style is seen. (The margins are the special rule-off margins or, if you do not define these, the text margins – for more information, see *2.7 Rulers.*) You cannot draw a rule-off in the middle of a paragraph.

① Rule off

Set this switch ***on*** if you want to draw horizontal rule-offs above or below a paragraph. (Remember, a paragraph is any block of text terminated by a *Return* – it can be just a single line of text.)

Rule-offs are displayed behind any text. This can be used to highlight the last line in a paragraph.

Thickness controls the vertical width of the rule-off lines. A thickness of ***0*** is an invisible line.

② Above text switch

Set this switch ***on*** if you want to draw a rule-off above the text. The *Offset* field ③ controls the position of the rule-off.

A rule-off above is drawn if this effect is applied to the **first** line in a paragraph.

If the preceding paragraph has *Rule-off below* set, this overrides any settings for *Rule-off above* for this paragraph. In fact, no rule-off above is drawn and vertical rules (if any) align with the preceding rule-off below.

③ Offset editable field

This controls the vertical position of the rule-off or top of vertical rules (described in *2.7 Rulers*) relative to the top of the text. (Technically the top of the text's bounding box.) A negative value moves the rule-off downwards; a positive value upwards.

If necessary, Impression increases the distance between lines of text to ensure rule-offs do not overlap the previous line:

This line has no rule-off.
This line has a rule-off above with 0 offset.

This line has no rule off.
This line has a rule-off above with 5pt offset.

④ Below text switch

Set this switch on if you want to draw a rule-off below the text. The *Offset* field ⑤ controls the position of the rule-off.

A rule-off below is drawn if this effect is applied to the **last** line in a paragraph.

⑤ Offset editable field

With a value of *0*, the rule-off or the bottom of a vertical rule is directly below the text. In this position rule-offs may clip descenders on characters such as 'y'. A negative value moves the rule-off downwards; a positive value upwards.

⑥ Rule-off colour

This controls the colour of the rule-offs.

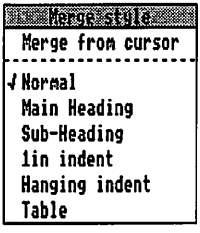
⑦ Vertical rule width

Set the switch ***on*** if you want vertical rules (described in *2.7 Rulers*). Remember to put vertical rule tabs on the ruler in the required positions.

The editable field controls the width of the vertical rule. Note that a thickness of *0* is an invisible line.

Merging Styles

Click on the *Merge* button in the Style Editor to display a menu of available Styles. (The first option *Merge from cursor* is described below.)



Clicking on a Style name merges the effects of that Style with the information in the Style Editor. Only the information in the Style Editor changes; the merging Style (the one you chose from the menu) is unchanged. You can merge several Styles in this way.

The new Style name is a combination of the names of the Styles that were merged into it. For example, if you merge *Style1* and *Style2*, the Style in the Style Editor is called *Style1/Style2*. You can, of course, edit this name if you wish.

Merge from cursor

This is the first option on the menu. It is greyed if there is no cursor (for example, when there is a selected region). If you click on this option, the information in the Style Editor (if any) is merged with the Effects and Styles set at the cursor. This is useful for easily creating new Styles from combinations of Effects. By creating some text with the required Effects and Styles applied, you can preview the appearance of the new Style. The new Style is called *From cursor*.

You can also use *Merge from cursor* to alter an existing Style (including *Normal*). Display the Style you want to change in the Style Editor and then click on this menu option. The Effects and Styles set at the cursor are then merged with the existing Style information in the Style Editor. The Style name has */from cursor* appended to it.

Automatic Style naming

When you create a new Style, the name in *Style name* is *Untitled*. If you do not change the name before clicking on *OK*, the Style Editor will give it an appropriate name.

2.7 Rulers

This section covers:

- types of ruler
- using Text rulers

Related sections of this manual:

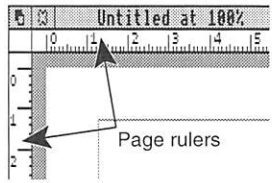
- 2.5 Effects
- 2.6 Styles

Rulers in Impression

There are two completely separate types of ruler:

- page rulers, and
- text rulers.

Page rulers are displayed along the top and left-hand edges of the frame.



They allow you to measure items but have no effect on the format of the document. They are only displayed for information. *Show page rulers* in *Preferences* on the Icon Bar Menu, *View* ⇒ *Page rulers* and a keyboard short cut of *Ctrl-P* turn the page rulers ***on*** and ***off***.

The following descriptions cover text rulers.

Text rulers allow you to adjust the margins and tab positions for the document and so have an important part in formatting the document. A 'ruler' is a specific set of margins and tab positions. There are two types of text ruler:

- local rulers, and
- style rulers.

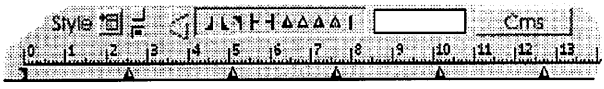
Local rulers are used in just one place. You create them by simply dragging the blobs on the ruler.

Style rulers are, as the name suggests, associated with a style. (A style can merely define a ruler, if that is what you require.) You can use a style again and again throughout a document.

If you look through this manual, you will see that we use a number of different rulers. For example, headings in this manual have their own ruler which positions them to the left of the body of the text.

Similarly, sections are often indented to the right like this, to emphasise something or to list options. This requires a different set of margins and tabs to the default ruler that controls the main body of the text.

To display or hide the current ruler (local or style) use *View* ⇒ *Tool bars* ⇒ *Style ruler.*



A typical text ruler

Rulers are always displayed at the top of the Impression window. The zero point on the ruler usually aligns with the left-hand edge of the selected frame. (It does not align if you have set *Insert* in the *Alter frame* dialogue box – see *2.8 Frame handling* for details.) If you click in a different frame, the ruler moves to keep its alignment with the frame edge.

All text has at least one ruler applied to it (the ruler defined in *Normal* Style).

The ruler shown is that currently applied at the cursor or in the selected region. The exceptions are:

- When the Style Editor (see *2.6 Styles*) is displayed on screen – the ruler associated with that style is then shown. (No ruler is shown if the style does not define a ruler.)
- When you display a selected region that contains more than one ruler. The appearance of the ruler changes to indicate that multiple rulers are present.

Note to users of Impression II and Impression Junior:
This is different to the way rulers worked in these programs. The ruler now always reflects the state at the cursor or in the selected region as a result of local rulers and styles – as you move the cursor, it updates.

Changing text margins (create a local ruler)

1 Select the region of text you want the ruler to apply to.
2 If necessary, display the *text* and *ruler bars*. (*View ⇒ Tool bars ⇒ Show text/ruler bars.*)
3 Modify the ruler by adding or removing tabs or changing the margins. This automatically creates a new local ruler and applies it to the selected text.

This operation creates a ***local ruler***, that is, a set of margins that applies only to this text. A ***style ruler***, on the other hand, is a set of margins and tabs that can be used in many different parts of the document. It is a just a ruler within a style.

Creating a new style ruler

You can either:

1 Create a new local ruler or select some text containing an appropriate local ruler.
2 Create a new style using the *Define* dialogue box. (This is described in *Creating a new style* in *2.6 Styles.*) You can therefore reuse a local ruler by converting it to a style ruler.

or

1 Create a new style using the Style Editor.
2 Select *Ruler* in the *Paragraph* dialogue box of the Style Editor. This displays the ruler bar which you can modify as required.
4 Click on *OK* in the Style Editor to implement the change. (For more details. see *2.6 Styles.*)

A style ruler is just a style that defines a ruler. So like a style, it has a name and can be used in many different places.

Changing a style ruler

You can either:

1 Display some text in the required style.
2 Move the tabs and margins as required on the ruler.
3 Redefine the style using the *Define* dialogue box. (This is described in *Modifying styles* in *2.6 Styles*.)

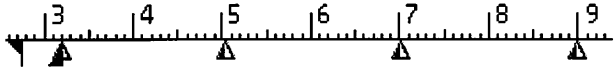
or

Use the Style Editor (described in *2.6 Styles*).

Creating an auto-indenting ruler

These are useful when creating lists and tables. An auto-indenting ruler automatically indents from the left-most tab of the current ruler. For example:

- This is the current ruler:



This is some sample text to show the effect of the above ruler. This is some sample text to show the effect of the above ruler. This is some sample text to show the effect of the above ruler.

- The ruler below is auto-indented, created from the current ruler. Notice that it is indented from the left-most tab of the current ruler at 3.2cm.

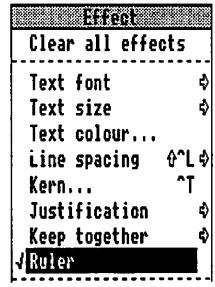
This is some sample text to show the effect of the above ruler. This is some sample text to show the effect of the above ruler. This is some sample text to show the effect of the above ruler.

Auto-indented rulers are created when you apply a style with the *Auto indent* option set. This option is in the *Paragraph* dialogue box of the Style Editor.

The auto-indented ruler has no effect if you later overlay the text with a local ruler or another style that defines a ruler.

Removing a local ruler

1 Select the region of text with the ruler applied.
2 Choose *Effects* ⇒ *Ruler*.



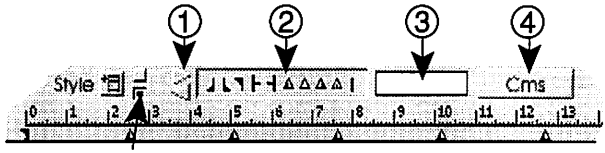
Removing a style ruler from the text

1 Select the region of text from which you want to remove the style ruler.
2 Remove the style. For details of removing styles see *removing a style from the text* in *2.6 Styles*.

Removing a ruler from a style

1 Display the style in the Style Editor.
2 Display the *Paragraph* dialogue box of the Style Editor.
3 Click on *Ruler* to deselect it. This removes the ruler from the Style.
4 Click on *OK* in the Style Editor to implement the change. (For more details. see *2.6 Styles*.)

The ruler bar

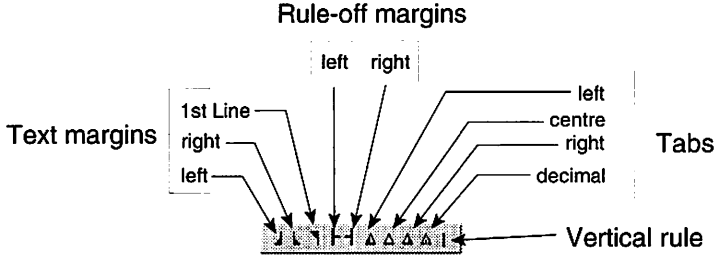


① Bump icons

Use these to step through items on the ruler.

If the cursor is in the editable field ③, pressing *Tab* has the same effect as clicking on the right-facing bump icon. Pressing *Shift-Tab* is the same as clicking on the left-facing bump icon.

② Ruler icons



The tabs are described later. *Vertical rule* in *Creating tables* in *2.6 Styles.*

Left margin

Except for the first line in a paragraph (which is controlled by the *1st line margin*), this defines the left margin for all text using this ruler.

Right margin

This defines the maximum right-hand margin. The right margin is relative to the right-hand edge of the frame and so defines the gap between the edge of the text and the edge of the frame.

The *right margin* is normally relative to the right-hand frame edge. If you position it 3mm from the right-hand frame edge, it maintains that 3mm margin even when the ruler is applied to a different sized frame or the frame resized. When typing into editable field use:

- negative numbers for right-relative values, and
- positive numbers for left-relative values.

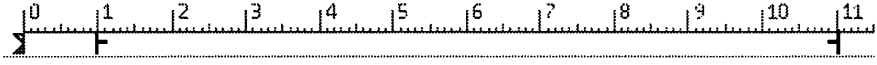
Be careful about placing small text actually touching a frame's edge. It can be very difficult when using the mouse to position the text cursor between the frame's edge and the adjacent letter.

1st line margin

(Also called the *Return margin.*) When you press *Return*, the cursor moves to this position on the next line. If you want all left-hand margins to be in line, set this margin to align with the *left margin.* (If you are creating or editing a ruler and you do not place the *1st line margin* on the ruler, it is automatically aligned with the *left margin.*)

Rule-off margins

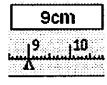
These control the left and right margins of rule-offs. (Refer to *Rules dialogue box* in *2.6 Styles* for details of associating rule-offs with a style.) This is the ruler for the rule-off below this paragraph:



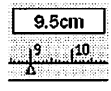
③ Editable field

Click on a tab or margin to select it. The editable field then tells you the exact position of that tab or margin on the ruler. You can move items on the ruler by:

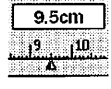
1 selecting the item,



2 typing their new value into the editable field, and

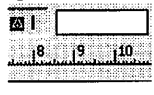


3 pressing *Return*.



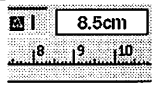
You can also place extra tabs on the ruler by:

1 clicking on the appropriate icon in *Ruler icons*,

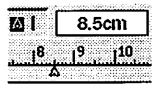


decimal tab selected

2 typing the required position into the editable field,



3 pressing *Return*.



(You can also move and place items on the ruler by dragging icons – this is described later.)

④ Units

Click on this box to step through the available ruler measurement units. These are

centimetres
inches ($^1/_{10}$ths divisions)
picas (a pica is $^1/_6$th inch).
inches ($^1/_8$ths divisions)

Changing the units only changes measurements displayed on the ruler. It has no effect on items placed on the ruler.

Tabs

This diagram shows how the types of tab available in Impression are used:

This	is	some	1.0
text	that	illustrates	123.45
the	various	types	.0123
of	tab.	The	67.89
right	hand	column	.00004
is	a	decimal	tab

- The first column is controlled by the conventional *left tab.* Text is left aligned.
- The second column is controlled by a *centre tab* meaning that the entire column is centered around the tab position.
- The third column is controlled by a *right tab.* Text is right aligned to the tab point.
- The last column is controlled by a *decimal tab* which is only usually used for columns of numbers. In this case the whole column is aligned around the decimal point as is traditional for tables of figures. Anything without a decimal point in it treats this as a *right tab.*

  The character used as a decimal point is specified in the Style Editor (see *2.6 Styles*).

Vertical rule

These are placed on and moved around the ruler exactly like ordinary tabs. However, they are not used to format text but to position *vertical rules.* These are lines used to construct tables and grids – for more information, see *Creating tables* in *2.6 Styles.*

Note that before a vertical rule is drawn, you must have set:

- a *vertical rule* in the required position on the ruler,
- set the *Vertical rule width* switch in the *Rules dialogue box* section of the Style Editor, and
- set a width other than *0* (which is an invisible line).

Placing and moving items on the ruler

You place or move items on the ruler by:

- Clicking on one of the icons to highlight it.

Then, click on the graduated scale. This places one of those items at that position on the ruler.

This mainly applies to tabs, as you can have up to 32 tabs (of varying kinds) on the ruler at once. With margins, you can only have one of each type on the ruler, so clicking with a margin highlighted moves that margin to a new position on the ruler.

Restriction: The *right margin* must be to the right of both the *return margin* and the *left margin*. The margin does not appear if you click in an illegal place.

- The icons can also be dragged, either from their current positions on the ruler, in which case that item's position changes,

or from the icons at the top of the ruler which places a new item on the ruler.

If there is already one of those items on the ruler (in the case of margins) or there are already 32 tabs on the ruler (in the case of tabs) then dragging has no effect.

- The *editable field* lets you accurately place the icons. This is described above in ④ *Editable field.*

You can combine dragging icons with using the editable field. You could drag or drop icons on the ruler in approximately the required position and then accurately position them using the editable field.

When dragging items around the ruler, notice that they appear to 'stick' to the ruler, as if the ruler were magnetic. This means you can tell if an item is being placed correctly: if it sticks, it stays on the ruler if dropped.

Notice that when you drag items along the ruler, they snap to the ruler marks. To disable this snapping, hold down *Shift* during the drag.

If you **Adjust**-drag an item, you also move any items (except the margins) to its right. This lets you move several tabs in one operation.

Removing items from the ruler

To remove an item from the ruler, drag it from its current position upwards, until it no longer sticks to the ruler.

Dropping the item while it is still sticking to the ruler only alters its position. It does not remove it.

Changing tab types

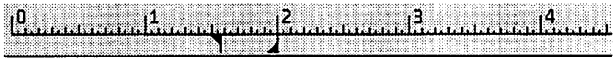
Remove the existing tab and place a tab of the correct type in the same place. The editable field shows the exact position.

Indents and hanging indents

It is quite a common requirement to have a series of numbered paragraphs where the numbers hang to the left of the main text

left margin. This is sometimes referred to as an '*outdent*'. Impression can create this attribute very easily by using the *1st line margin*. The position of this on the ruler controls the left edge of the first line of every new paragraph. This is often useful if the first line of each paragraph is to be indented, in which case the symbol would be positioned a small amount to the right of the left margin indicator.

A hanging indent would be the opposite. The 1st line margin symbol would be positioned slightly to the left of *left margin* thus



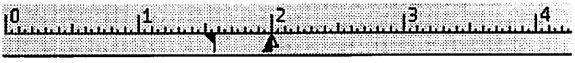
This creates the following result.

1. This is a numbered paragraph. As this line is at the start of a new paragraph it starts slightly to the left of this second line. Indeed all subsequent lines will use the *left margin* until the start of the next paragraph.

2. In fact we can go one better than this by using the *tab* feature as well. With the ruler shown above, the first line of every paragraph will start outdented. However this may not always be wanted.

For example, a paragraph that does not start with a number would normally look better if it lines up with the normal left margin and is not outdented.

Of course this can be achieved simply by typing a few spaces at the line start but it can be quite difficult to get accurate results. However, if a tab symbol is positioned exactly coincident with the left margin thus:



then it is only a matter of pressing the tab key at the start of a paragraph to move the line start to the normal left margin position. In the above diagram the left tab is positioned directly over left margin mostly obscuring it.

1. This is an outdented numbered paragraph.

   Whereas this paragraph starts with a *tab* so that its left edge aligns with the left margin.

2. Whereas this is a normally outdented line again.

2.8 Frame handling

This section covers:

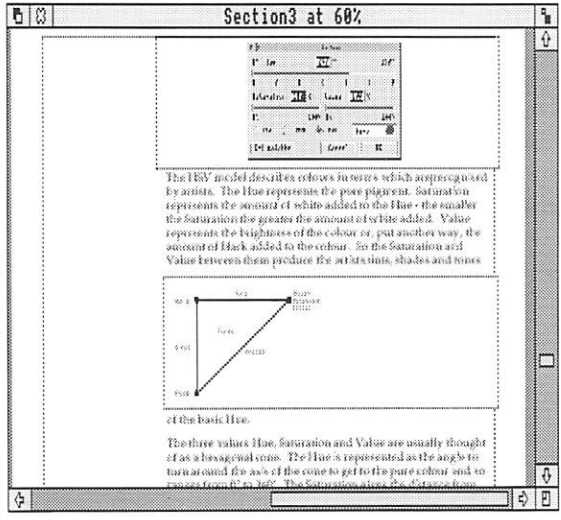
- the types of frame
- flowing text stories
- grouping frames
- frame borders
- the *Alter frame* dialogue box

Related sections of this manual:

- *2.9 Graphics handling*
- *2.10 Master pages*

How Impression uses frames

A frame is a box that contains either text or a graphic. Everything in a document is contained within frames and all editing action occurs within a frame. You cannot mix text and graphics inside a single frame, but by overlaying text and graphic frames you can produce a page that appears to freely mix text with graphics.



Example text and graphic frames

A frame cannot be larger than the page it exists on nor can it extend onto another page. Within these limits, you can create, move and adjust frames as you wish.

There are these types of frame:

- ***blank***
- ***text***
- ***graphic***
- ***guide***,

and they can be used as

- ***master page frames***
- ***local frames***
  blank, text, and graphic frames can also be used as
- ***repeating frames***
- ***headers & footers*** (a special form of repeating frame)
- ***embedded frames***.

You create a frame as either a ***blank*** frame, a ***blank repeating*** frame or a ***guide*** frame.

Blank frames

If you type or drop text into a ***blank*** frame, it becomes a ***text frame***.

If you drop a graphic into a blank frame, it becomes a ***graphic frame***. A graphic is usually an illustration. (For more details on graphics, see *2.9 Graphics handling.*)

You cannot drop a graphic into a text frame or put text into a graphic frame.

Irregular frames

These are a special form of graphic frame. Irregular frames can have any number of sides, which do not have to be horizontal or vertical. All other frame types are rectangular with vertical and horizontal sides. Irregular frames are useful in masking parts of a graphic or flowing text around a graphic.

Guide frames

These are used to position other frames and cannot themselves hold text or graphics. They are used to create magazine-type page layouts which are usually multi-column. Guide frames would then show the positions of these columns, and text and

graphic frames would be positioned to the column outlines.

Guide frames have an orange outline.

Guide frames cannot be used as repeating or embedded frames.

There is more on guide frames later in this section.

Master page frames

Any frame on a master page is a ***master page frame***. (For information on master pages see *2.10 Master pages.*)

Local frames

A ***local frame*** appears only on a single normal page (that is, a page that is not a master page).

Repeating frames and Headers & footers

You sometimes want to repeat information on several consecutive pages (like the heading to this page – *2.8 Frame handling*). To do this you use these types of frame.

There is more later in this section.

Embedded frames

These are text or graphic frames embedded into the text. They are described in detail later.

The selected frame

Normally you can only move or resize the ***selected frame***. The selected frame always has a solid outline (orange for guide frames, blue for irregular frames and green for other frame types). Click **Select** inside a frame to select it.

You can also move or resize a frame if it is a multiple selected or grouped frame – described later.

Creating new frames

Use *Frame* ⇒ *New frame* ⇒ *submenu* or
Ctrl-Shift-I for a new blank frame or
Ctrl-Shift-E for a new repeating frame.
There is no keyboard short cut for guide frames.

You can also use *Frame* tool on the Toolbar. **Select**-click on the tool to display the submenu. **Adjust**-click to choose *Blank frame*.

1. A pair of cross-wires tracks the mouse pointer. Position them where the top left-hand corner of the frame is to be.
2. Press and hold down **Select**.
3. Drag the cross-wires to where you want the bottom right-hand corner to be.
4. When in position, release **Select**.

The newly created frame is always the selected frame.

Dragging frames about the page

Frames can only be physically moved about a single page. To move a frame to another page or document, use cut and paste.

Frames can be moved using either the mouse or a dialogue box. Using the mouse is generally easier but is not so precise as using the dialogue box.

Using the mouse

This method will not work if the frame has been locked in place. (*Lock frame* is set using the *Alter frame* dialogue box – described later.) Also, it does not work for master page frames except in the master page window. (See *2.10 Master pages.*)

Position the mouse pointer inside the frame and then either

- hold down **Select** for at least a second, or,
- for immediate effect, first hold down the *Ctrl* key and then press **Select**. (This only works if the frame is the selected frame.)

In both cases, the mouse pointer changes shape to signify that the frame can be moved about. You must keep the mouse button held down as you move or drag the frame about.

Alternatively position the mouse pointer over any edge of the selected frame, avoiding the frame handles (described later). The mouse pointer changes shape. You can now slide the frame as just described. This method requires precise positioning of the mouse pointer. You may not be able to pick up some of the edges (particularly vertical edges).

Using the *Alter frame* dialogue box

Use *Frame* ⇒ *Alter frame* or the Toolbar to display the *Alter frame* dialogue box. This is described later.

Cutting, Copying and Pasting frames

Cut Frame

Edit ⇒ *Cut frame* or *Ctrl-X* or the *Cut* tool on the Toolbar.

This option copies the frame to the clipboard and deletes it from the document.

If the frame contains a complete story or a graphic, or an embedded frame, then the story, graphic, or embedded frame is cut as well.

If the frame contains a text story that flows into other frames, then removing this frame causes the text to re-flow in the remaining frames. That is, it only cuts the frame, not the contents.

A frame is cut with all its attributes including border style, dimensions, background colour and story type.

If the frame is a master page frame, it can also be deleted from the page on a local basis. This does not cut the frame from the master page – it simply removes the local copy of it on this page. To delete the frame from the master page, go to the master page (*View* ⇒ *View master pages*) and use this option or the similar *Delete frame* option.

Copy frame

Use *Edit* ⇒ *Copy frame* or *Ctrl-C* or the Toolbar.

This is similar to *Cut frame* except that the frame is only copied to the clipboard. It is not removed from the document.

Paste Frame

Use *Edit* ⇒ *Paste frame* or *Insert* or *Ctrl-V* or the Toolbar.

A pair of cross-wires tracks the pointer. Position them to where you require the top left-hand corner of the frame. When in position, click **Select** to paste the frame.

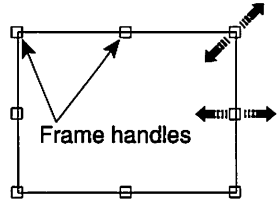
If the frame holds a complete story, then the story is also pasted. Similarly, if the frame contains a graphic, that is also pasted.

If a frame has been cut or copied from a series of flowing text frames, then its contents are not copied to the clipboard. In this case, the frame becomes an empty frame when it's pasted back – relink text into it if required.

Resizing frames

There are two ways of changing the size of the selected frame. You can either:

- Use the mouse to drag one of the eight frame handles.



  This allows you to see how the resized frame will look as you alter it. You cannot use this method if the frame has been locked in place or for master page frames on local pages.

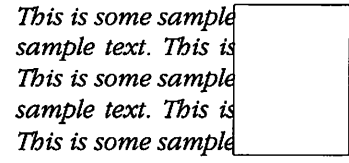
  You can use either **Select** or **Adjust** to resize the frame. If the frame contains text or is empty (blank), both buttons have the same effect. If the frame contains a graphic, **Adjust** resizes both the frame and the graphic; **Select** only resizes the frame and leaves the graphic size unchanged.

- Use the *Alter frame* dialogue box (described later). This option lets you alter the position on the page, the height, and width of the frame. Although you cannot preview how the resized frame will look, this lets you accurately control the frame's position.

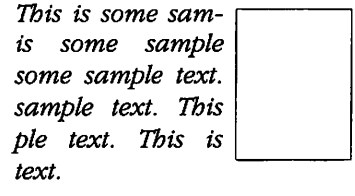
Impression reformats any text within a frame when it is resized.

Transparent frames and repelling text

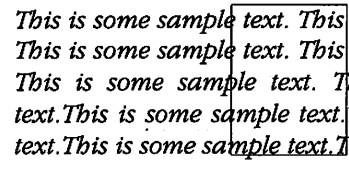
Normally, any underlying text flows up to and around the boundaries of the frame. If required (by using the *Alter frame* dialogue box), text can be repelled away from a frame's boundaries or can flow under the frame as in this example (the frame has a solid outline):


This is some sample text. This is some
sample text. This is some sample text.
This is some sample text. This is some
sample text. This is some sample text.
This is some sample text. This is some

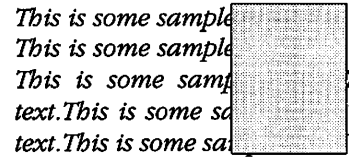
If you want underlying text to be repelled away from the borders of a frame, set the *Repel text outside* option and enter the required values in the editable boxes. This example uses *2mm* repel to the left and *10mm* on the right.:



If you want to see text or a graphic that is underneath the frame, set the frame background to ***transparent***. (This option is on the *View* page of the *Alter frame* dialogue box.)


This is some sample text. This is some sample text.
This is some sample text. This is some sample text.
This is some sample text. This is some sample
text.This is some sample text.This is some sample
text.This is some sample text.This is some sample

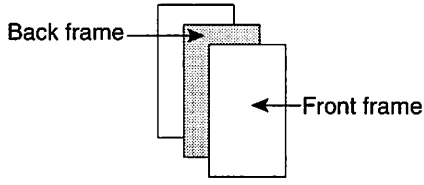
If you want the frame to hide any text or a graphic that is underneath it, make the frame opaque by setting a background colour.


This is some sample is some sample text.
This is some sample is some sample text.
This is some sam his is some sample
text.This is some sa This is some sample
text.This is some sa his is some sample

Irregular frames have only a single value for repel which applies to all sides. There is more on irregular frames later.

Changing the stacking order of frames

When you create a frame, that frame is always the 'front' frame (other than a guide frame, which is always behind other frames) and masks any parts of other frames that it overlaps.



You can change the frame order using:

- *Bring to front* or the *Bring to front* tool. These move the frame in front of all other frames.
- The *Move forward* tool. This moves the frame one step towards the front.
- *Frame ⇒ Put to back* or the *Put to back* tool on the Toolbar. These move the frame to the back, behind all other frames.
- The *Move backward* tool. This moves the frame one step towards the back.

Move forward Bring to front
Move backward Put to back

Be careful when using the backwards options as you may accidentally hide a frame behind a larger frame. If this happens, the next section explains how to retrieve the frame.

Selecting overlapping frames

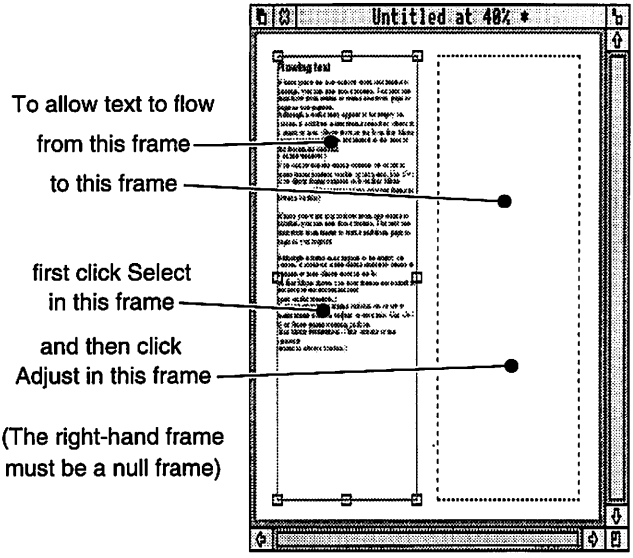
If you have a frame hidden by another overlapping frame, you cannot select it by clicking on it because of the overlapping frame. To select the underlying frame:

- Use the *Put to back* menu option to move the overlapping frame to the back. This lets you select the previously hidden frame as normal.

- Position the mouse pointer over the underlying frame. Hold down *Alt* and then click on a mouse button to select the frame. Using *Alt-click* allows you to alternate between the two frames. This method can be used on any number of overlapping frames.

Flowing text

Where you want text to flow from one frame to another, you can link those frames. The text can then flow from frame to frame and from page to page as you require.



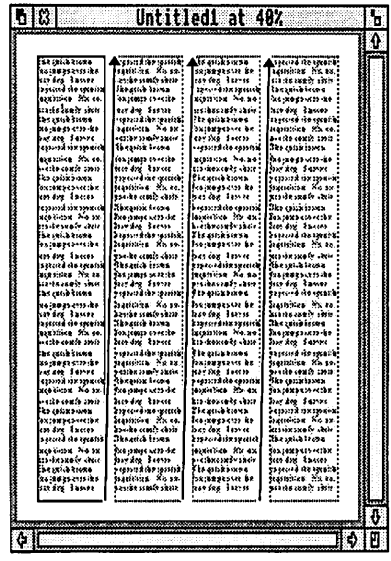
You can link frames together at any time, either before entering any text or while you are typing in the text.

You can also link in more frames this way. Click **Select** in the last frame in the story and then click **Adjust** in the frame to be added. (You can add more frames in the middle of the chain in exactly the same way.)

If you subsequently delete one of the frames, the text story reformats itself in the remaining frames.

Although a frame may appear to be empty on screen, it could be a text frame linked to others in a chain of text.

Show flow on the Icon Bar Menu or the *Show flow* tool shows the text flow of those frames currently displayed in the editing window. Arrows from the bottom-right corner of a frame to the top-left of the next frame indicate the text flow.



Text story frames linked

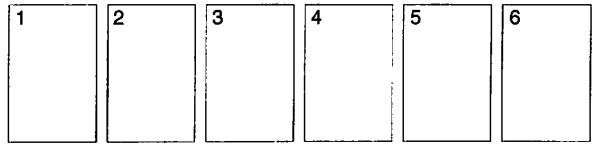
More on...

...repeating frames

Repeating frames are ideal for inserting headers and footers into a document. These are small frames at the top and bottom of each page containing, for example, section headings or page numbers.

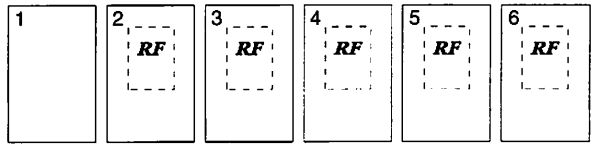
If you put a repeating frame on one page of a left/right pair of pages, it does not repeat on the other page of the pair. This lets you position different headers and footers on both sides.

To show its application, assume you have a 6-page document

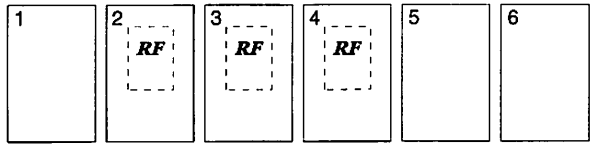


and you want a repeating frame on pages 2, 3, & 4.

If you put a repeating frame (***RF***) on page 2, it will initially appear on pages 2 to 6 but not on page 1:



To stop the frame appearing on pages 5 and 6 of the finished document, remove it from page 5 by selecting and then deleting it. It then disappears from pages 5 and 6 but remains on pages 2 to 4:



There are certain rules with repeating frames:

- You can move or resize a repeating frame on any page where it is used. This changes the other copies of that frame.
- You can move a graphic in a repeating frame on any page where the frame is used. This changes the graphic in the other copies of the frame.
- You can only edit text in the first frame and not in any of the copies. A quick way to move to the first frame is to double-click in any of the copies.

- Repeating frames cannot be grouped. (Grouping and multiple selection of frames are described later.)

...Headers & Footers

These are a special form of repeating frame. *Edit ⇒ Add Header* adds a header frame to the top of the page and *Edit ⇒ Add Footer* Adds a footer frame to the bottom of the page. You can then enter text or drop a graphic into the frame.

You may want to change to a different header or footer part way through a document. Make the first page where the new header or footer is required the current page. (The current page contains the selected frame.) Then choose *Add Header* or *Add Footer.*

...guide frames

To help when aligning frames set *Frame ⇒ Snap ⇒ To guides.* When this option is set, any frame edge brought close to a guide frame snaps to the guide frame as though drawn to a magnet.

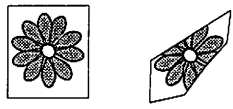
(There is a similar option, *Frame ⇒Snap to frames*, that snaps to the other types of frame. You can make snapping the default – see *3.14 Customising Impression* for details.)

If you change a local guide frame, this does not affect any frames already snapped to it.

If you change a master page guide frame, the change applies to any local frames already snapped to it.

...irregular frames

Only graphic frames can be made irregular. Irregular frames have a blue outline if they are the selected frame and a solid light-grey outline otherwise. Irregular frames are useful for cropping graphics (as shown below) or repelling text away from an irregular shaped graphic.



Left: a graphic in a normal frame.
Right: the same graphic cropped by an irregular frame.
(Frame outlines shown solid.)

To make a frame irregular use *Frame ⇒ Make irregular*. When you make a frame irregular, the only visible change is that the frame outline changes to blue. However, the eight frame handles are now separate handles on the edge of the frame.

To make the frame regular again use *Frame ⇒ Make regular*.

You can only edit an irregular frame (add, delete or drag handles) if *Frame ⇒ Show irregular* is set. (*Shift-F1* toggles this option ***on*** and ***off***.) If *Show irregular* is ***off***, a rectangular outline is drawn surrounding the frame. You can resize the frame as a normal frame.

To change the shape of the frame, drag any of the handles on the frame edge.

To add a new handle, click on the frame edge.

To delete a handle, either:

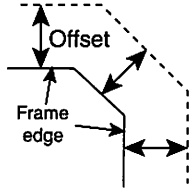
- *Shift*-**Select** click on the handle
- drag the handle over another handle.

To rotate a graphic frame, **Adjust**-drag on the *Rotate* handle of the graphics tool. (The graphics tool is described in *2.9 Graphics handling*.) Rotating a regular frame automatically makes it irregular.

To scale the frame and the graphic inside it, **Adjust**-drag on the *Scale* handle of the graphics tool. (You can also scale a frame and graphic by **Adjust**-dragging a frame handle.)

You can apply a simple line border to an irregular frame. Refer to the *View* dialogue box (later) for details.

You can repel text away from the edges of the frame by specifying a repel offset in the *Alter frame* dialogue box (described later). This offset is perpendicular to the frame edge:



Embedded frames

These are text or graphic frames that are embedded in the text story. They retain their relative position in the story regardless of any edits that may be made to earlier text. Most of the pictures of menus and dialogue boxes in this manual are in embedded frames.

For example, the graphic to the left and this text are in embedded frames. (Frame outlines shown solid for clarity.) Embedding a text frame next to a graphic is an easy way to add captions or annotations to graphics.

You can increase or decrease the size of embedded frames, except that they cannot be wider than the current text margins.

Embedded frames act like text. Thus, you can apply styles and effects to them, such as centering them within a column of text. Cut & paste or drag & drop operations on text that includes embedded frames also copies those embedded frames.

To embed a frame, you

1 Create a local frame of approximately the required size. (Final adjustments to the size can be made after the frame is embedded.)
2 Cut the frame to the clipboard.
3 Position the cursor where you want to insert the frame.

4 Embed the frame, either by typing *Ctrl-Shift-F* or using *Frame ⇒ Embed frame.*

There is a quick way to embed a graphic:

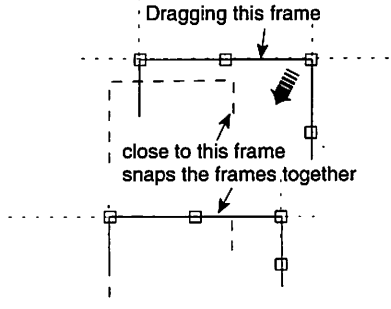
1 position the cursor where you want to embed the graphic,
2 drop the graphic onto the current frame. This embeds the graphic at the cursor – see *2.9 Graphics handling* for more details.

Aligning frames

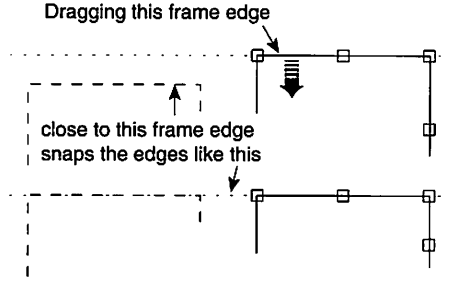
Aligning to other types of frame

Often you want to align the edges of two or more frames. Impression makes this easy. Choose *Frame ⇒ Snap ⇒ Snap to guides* (for guide frames), *Frame ⇒ Snap ⇒ Snap to frames* (for other frame types). (The *Frame snap* tool toggles the current snap selection ***on*** or ***off***.) Then frame edges snap together or into alignment as though drawn to a magnet. This option has two uses:

- to snap frames or frame edges together:



- to align frames or frame edges:



You can make frame snapping the default – see *2.16 Customising Impression* for details.

Aligning to the page grid

The horizontal and vertical spacing of the grid is set when you create the master page. See *2.10 Master pages* for more details. Click on the *Show flow* tool to display the page grid.

With *Frame* ⇒ *Snap* ⇒ *Snap to grid* selected, moving frames and frame edges causes them to snap to the nearest grid point.

Multiple selection of frames

An example of using multiple selection – a graphic frame may be overlaid with several text frames containing captions or comments. To move the frames, you can multiple select them and then move them as though they were one frame.

To do this either:

- select any of the frames in the usual way by clicking **Select** inside it. Then hold down the *Shift* key and click **Select** in each of the other frames in turn. As you click inside a frame, its outline changes from dotted to solid. (To select overlapping frames, you may need to also hold down the *Alt* key.)
- Hold down *Shift* and drag the mouse diagonally. This creates a frame-selection rectangle.

When you have selected all the frames you can move them as a single frame by dragging or cut and paste and so on.

You can also detach a frame from the group by *Shift-clicking* in it again. (You cannot detach the frame showing handles.)

Multiple selection is useful if you want to delete several frames on a page. Instead of selecting and deleting each frame in turn, you can quickly multiple-select them and then delete them all at once. It is also useful if you want to move several independent frames together by the same amount (for example, to make space for inserting a new frame).

Multiple selection only groups the frames temporarily. If you click in another frame that is not part of the group, the grouping ends and the frames again become independent of each other. To make the grouping permanent use *Frame ⇒ Group frames*. The frames then always move as if they were a single frame.

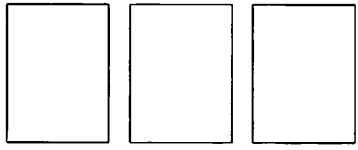
To cancel the *Group frames* option, click **Select** in one of the frames and then choose *Frame ⇒ Ungroup frames*. Do this if you want to reposition one frame relative to the others in the group.

Grouped and multiple-selected frames can be cut, copied, deleted, pasted, and dragged exactly the same as normal frames.

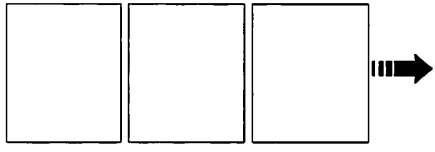
Grouped frames also scale together in proportion. This feature is very powerful in two ways:

- Suppose you have three columns of text and you want to make them all slightly wider. By grouping all three frames, the group now acts as one, three-column frame. If you now resize the group, all three columns change in proportion.

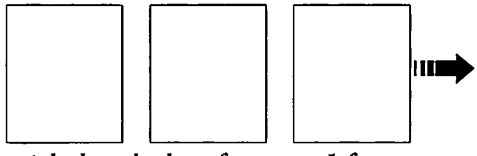
Grouped and multiple selected frames rescale in slightly different ways.



The original frames



Moving the right hand edge of ***multiple selected*** *frames only moves that edge. The left hand edges do not move and so the distance between the frames gets narrower.*



Moving the right hand edge of ***grouped*** *frames rescales the frames and the gaps between them. The distance between the frames gets wider.*

- If a selection of graphic frames are grouped, they then behave like a single graphic frame. Resizing the group changes the size of all the individual parts. Using **Adjust** also rescales the graphics (exactly the same as for a single graphics frame).

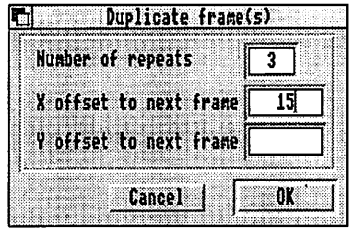
Creating duplicate frames

Frame ⇒ *Duplicate frames* lets you replicate one or more frames. This is useful for creating forms and similar documents that have several identical frames equally spaced. (For example, when laying out business cards.)

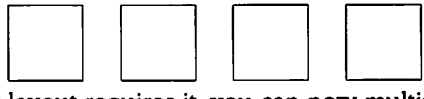
Creating a series of duplicate frames

1 Either create a new frame or select an existing frame. (You can also duplicate multiple selected frames.) This example uses a 10mm square frame:

2 Display the *Duplicate frame* dialogue box (*Frame* ⇒ *Duplicate frame*) and enter the required values. Positive values duplicate frames to the right (*X offset*) or down the page (*Y offset*). Negative values duplicate to the left or up. A blank field (*Y offset* in the illustration) means no offset:



3 Click *OK* to create the duplicate frames:



If the document layout requires it, you can now multiple select these frames and then duplicate them again down the page.

Drawing lines

Impression does not have a separate line drawing function. Instead for drawing horizontal lines under text you can use rule-offs. (These are described in *Style Editor* in *2.6 Styles.*) For drawing vertical lines you can use vertical rules. (These are described in the *2.6 Style Editor* and *2.7 Ruler.*)

There are also two ways of using frames:

- put a border on one or more edges of a frame (described later), or
- create a separate frame and set an appropriate background colour.

You can create lines of any size and in any position by creating a long, thin frame the length and width of the required line. You will find it easier to adjust the frame using the *Alter frame* dialogue box rather than dragging the frame handles.

When you have created the frame, go to the *View* page of *Alter frame.* Click on the *Colour* radio button and then click on the Colour editable box. This displays the colour picker (described in *2.12 Colour handling*) and you can use this to change the frame's background to black.

You can also create faint lines this way by changing the frame colour. For printing, you may need to experiment using different colours to get the required density of line.

Once a thin frame has been created, it can easily be used again and again by copying it to the clipboard and then pasting it where required.

If you want to create more complex lines or curves, we suggest using *!Draw* to create the line. Place this in a transparent frame. You can then use the graphics tool to scale, rotate, or position the line as required.

Borders

You can put a border around any type of frame (except a guide frame). Each edge of the frame can have a different border design or can have no border. (Special limitations apply to irregular shaped frames – see below.) You can also specify a border colour.

Eleven border designs are provided as standard by Impression. These are:

1 1/4 pt black line
2 1 pt black line
3 4 pt black line
4 1/4 inch Dark grey mitred slab
5 1/4 inch Light grey mitred slab
6 1/8 inch Black drop shadow left
7 1/8 inch Black drop shadow right
8 1/4 pt black line and 1/8 inch offset 2pt black line
9 1/8 inch offset, centre and corners only, 4pt black line
10 1/4 inch offset 4pt black line with curved corners.
11 Cut marks. This border is useful if you want to print one or more a small cards or leaflets (such as business cards) on a larger sheet of paper and then cut them to size after printing.

Appendix 6 shows these borders.

You can also create other border designs using *!Draw* and then include them in a document. There can be up to 29 of these borders (numbered 12-40).

There are some differences between the standard borders 1-10 and the draw-file borders 12-40:

- You cannot delete borders 1-11 from the borders list. Borders 12-40 can be deleted.
- Borders 12-40 occupy space in the document. A complicated border can require large amounts of storage space. This can make even simple documents occupy a lot of

disc space. Borders 1-11 do not occupy space in the document.

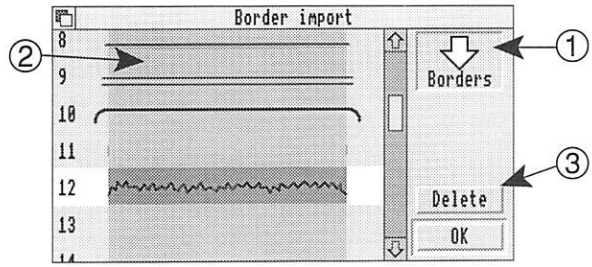
Putting a border around a frame or changing the border colour is described later in *Alter frame*.

The file *Borders* on the Style discs provides a range of extra borders. *Appendix 6* also shows these borders. Loading extra borders and controlling the border list is described below.

Available from Computer Concepts is a *Borders* disc which provides over 100 extra borders in a wide variety of styles.

Importing and deleting borders

Use *Frame ⇒ Border import*.



Importing borders

Import borders in Draw format. Drop their file icon onto the load target ①. This loads the border and adds it to the scrolling list ②.

Deleting borders

You can only delete borders 12 to 40.

1 Display the required border in the scrolling list ②.
2 Click on it to select it. (The illustration shows border 12 selected.)
3 Click on *Delete* ③ to delete it.

Creating new borders using *!Draw*

There are some rules to follow when creating a new border design using *!Draw*. These are

- Create the left-hand border. That is, make it tall and thin and designed so that it touches the left-edge of the frame. When Impression uses this border on the other edges of a frame, it rotates the border as required.
- You can have several objects in your draw-file. If so, there are differences between how the backmost object and the other objects are handled:
  - The edge of the frame is aligned with the right-hand edge of the backmost object. The other objects are positioned relative to this edge.
  - The backmost object is stretched so that it exactly fits the edge of the frame. The other objects do not change shape but slide to a scaled position along the edge of the frame.

The backmost object is, by default, the first object created. You can change the stacking order in *!Draw* using the *Select* command. For more information on *!Draw*, refer to Acorn's *User Guide*.

Irregular shaped frames

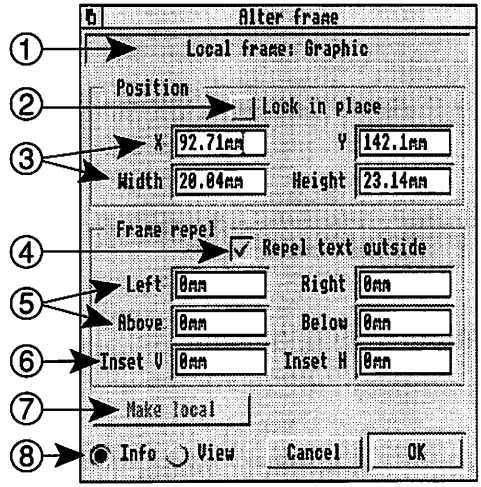
These cannot use standard or imported borders. Instead, the *View* dialogue box of Alter frame lets you specify a border thickness and colour. This border is applied to all frame edges.

The *Alter frame* dialogue box

Use *Frame* ⇒ *Alter frame* or *Ctrl-F10* or the *Alter frame* tool.

This lets you alter the size and position of the selected frame which can be of any type (***text***, ***graphic***, ***guide*** or ***blank***). It also lets you change the frame borders and the colour (if any) of the frame background. These two groups of functions are controlled by two separate pages of the dialogue box. Use the *Info* and *View* buttons ⑧ to flip between the pages.

If the *Alter graphics* dialogue box is on screen, it is automatically closed if this option is chosen.



While the *Alter frame* dialogue box is on screen, documents can be edited normally. If the selected frame changes during editing (you might click in another frame or move the cursor into a new frame), the *Alter frame* dialogue box is updated to show the newly selected frame.

Changes are incorporated in the document only when you click on *OK*. If you make changes and then move on to another frame without clicking on *OK*, those changes are discarded.

Adjust-click on *OK* to make the changes and keep the dialogue box on screen.

Info page

① Information panel

This describes the type of frame (for example, ***Local frame: Graphic***).

The final item only applies to text frames and it tells you whether the text story overflows from this frame. Text can overflow from a frame if there is more text than will fit in the frame and there is no other frame for the text to flow into (***truncated text***). This is a very important warning because it means that some of the text is not shown in the document!

Position area

These options are greyed if the frame is a master frame and the cursor is not in the master page window.

② Lock in place

This allows the frame to be locked onto the page so that it cannot be accidentally moved or resized by the mouse.

③ Dimensions

These describe the position and size of the frame on the page.

X and ***Y*** give the distance of the top left-hand corner of the frame from the top left-hand corner of the page.

Width and ***Height*** give the width and height of the frame. The ***X***, ***Y***, ***Width*** and ***Height*** values are shown in millimetres by default, but they can be entered in any of the standard units. See the *Appendix 2: Using dialogue boxes* for a full list of units recognised by Impression.

Frame repel area

These options are greyed if the frame is a guide frame.

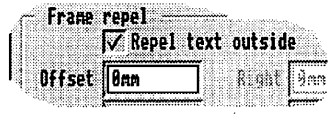
④ Repel text outside

The frame only repels text in frames underneath it if this switch is ***on***; when ***off***, text in lower frames flows underneath the frame.

⑤ Repel distance

When the *Repel* switch is ***on***, these describe how far the text will be pushed from that edge of the frame. The repel distance is in addition to the width of any frame border that might be drawn along that edge.

⑤ Offset (irregular frames)



Irregular frames have a single repel value that applies to all edges of the frame. Refer to *Irregular frames* for more information.

⑥ Inset

The *Vertical* and *Horizontal* settings allow you to repel text or a graphic inside a frame away from the edges of the frame. If a frame has a border, usually you want text to start about 3 mm away from the edge of the frame. You would therefore set both values to ***3mm***.

⑦ Make local

Local frames can be resized and can be dragged around the page whereas master page frames cannot. So there are occasions when you want to adjust a master page frame, but only on one page.

This is used to make a master frame become local to the page on which it exists. Only the copy of the frame on the current page is "made local"; the parent frame on the master page itself is unchanged. The button is disabled if the frame is not a master page frame.

Making a frame local means it is no longer automatically altered when the parent frame is altered on the master page. A warning box appears reminding you of this before the frame is made local. The change is only made when you click on the *OK* button so you still have the option of clicking on *Cancel* to keep the frame as a master frame.

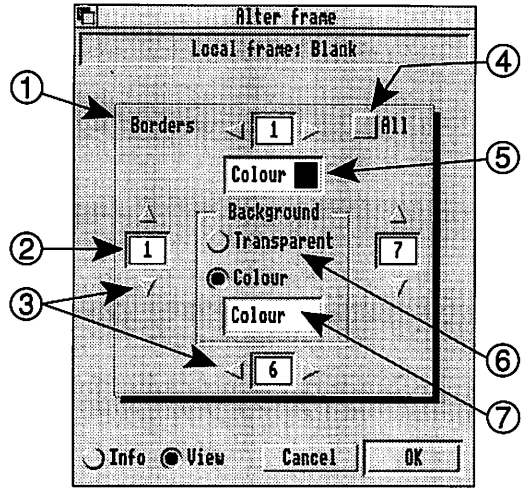
If this frame contains part of a flowing text story, making the frame local has no affect on this. The story continues to flow through this frame as before.

⑧ Info / View buttons

Click on *View* to display the *View* dialogue box.

View dialogue box

You cannot access this dialogue box if the frame is a guide frame. Irregular shaped frames have a special version of this dialogue box (described later).



The *View* display describes how the frame is drawn. The thin white rectangle ① represents the frame and the editable fields against each of the edges ② hold the border number for each edge. A half-size version of the border is drawn in the dialogue box to show you the effect. The border numbers can be changed by:

- Clicking on the bump icons ③ around them.
- Clicking on them and typing. Any changes are only implemented when the cursor is moved out of the editable field with the cursor keys, *Tab, Shift-Tab* or *Return.*
- Moving the mouse pointer over where the half-size border is displayed ①. The mouse pointer changes to a page shape when in the correct place. Click **Menu** to display the border list (described earlier). Click on the required border in the list to select it.

Creating additional borders is described in *Borders* (in this section).

Notice that the illustration of the dialogue box shows how to use the drop shadow borders 6 and 7.

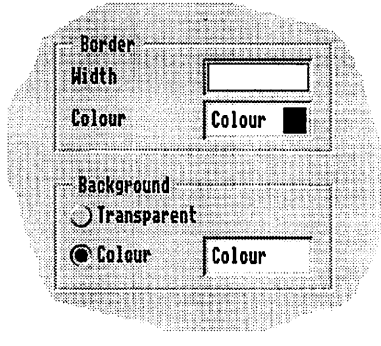
All ④ lets you alter all the borders simultaneously. While this switch is ***on***, changing any one of the four border numbers changes the other three to the same value.

Colour ⑤ displays the current frame border colour. Click on it to display the colour picker; this is described in *2.12 Colour handling*.

Transparent and *Colour* ⑥ determine whether the frame has a filled background or not:

- If *Transparent* is set, the frame has a transparent background. Anything underneath the frame will show through wherever text or graphics don't fill the frame.
- If *Colour* is set, the frame background is set by the colour field and anything underneath the frame is hidden. Click in the colour field ⑦ to display the colour picker; this is described in *2.12 Colour handling*.

View dialogue box (irregular frames)



You can apply a single line around all the edges of an irregular frame. Specify width and colour in the *Border* section.

Background is identical to ⑥ and ⑦ in the normal *View* dialogue box.

2.9 Graphics handling

This section covers:

- what are graphics
- loading graphics
- manipulating graphics
- saving graphics
- the *Quality* menu option
- Object Linking & Embedding (OLE)
- the *Alter graphics* dialogue box

What are graphics?

Graphics are generally illustrations but could be, for example, an equation generated in *Equasor* (a separate application supplied with Impression). In Impression graphics can be:

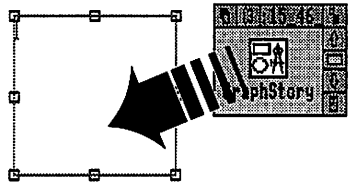
- Draw files. Many packages on Acorn computers can export data in Draw format.
- Sprites or bit-images. These are produced by painting packages such as *!Paint* and also scanners. Impression supports new format 16-bit and 24-bit sprite. It can display these and print them on suitable colour printers. (At the time of writing, most colour printer drivers are only 8-bit.) Computer Concepts can supply suitable drivers for many colour printers.
- ArtWorks files produced by Computer Concepts' *ArtWorks* application.
- Any graphics file that follows the OLE conventions. For example, *Equasor* and *TableMate*. (There is more information on OLE later in this section.)
- Any graphics file for which Impression has a loader or converter such as TIFF images. (TIFF files are widely used on other types of computer.) A graphics loader package is available from Computer Concepts for £39 + VAT. This includes an enhanced TIFF loader and loaders for JPEG, Clear and PhotoCD files.

Generally Impression treats all these types of graphics in the same way. The following descriptions use *Graphics* to mean any of these file types and only uses the individual names where the particular file type is treated differently.

Loading graphics

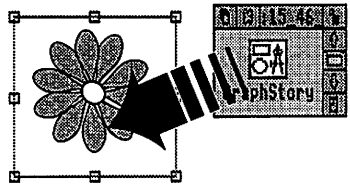
You can load graphics into Impression in three ways:

- Create a blank frame and drop a graphics file icon onto it.



This loads the graphics and scales it to exactly fit the frame.

- Drop a graphics file icon on an existing graphics frame.



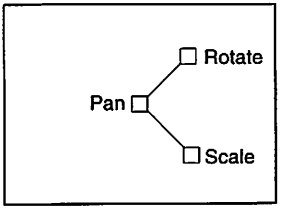
This overwrites the existing graphic. The new graphics is scaled to exactly fit the frame (unless *Lock values* – described later – is set).

- Position the cursor where you want to embed the graphic. (Refer to *Embedded frames* in *2.8 Frame handling*.) Drop the graphics file icon onto the frame containing the cursor. This creates a new embedded frame which contains the graphic. The graphic is shown full size (100%). If the graphic is wider than the embedded frame, it is scaled to fit (that is, it is displayed at less than 100%).

Except for an embedded graphic, a text frame can never hold a graphic. If you want to replace a text frame with a graphic, you must first delete the text frame and then create a new graphics frame of the same size. (The converse is also true – you can never use a graphics frame as a text frame.)

The graphics tool

Click inside a graphics frame to display the graphics tool:



Pan is described in *Moving graphics*.
Rotate in *Rotating graphics*.
Scale in *Resizing graphics*.

Moving the mouse pointer over a handle changes the pointer shape. Hold down either **Select** or **Adjust**. The tool disappears and you can then perform the required action.

Using **Select**...

...pans, rotates, or scales the graphic, as appropriate.

Using **Adjust**...

...pans the graphic or
...rotates both the graphic and the frame or
...scales both the graphic and the frame.

Resizing graphics

You can resize (enlarge or reduce) a graphic by:

- resizing the frame using **Adjust**, or
- using the Scale editable field in the *Alter graphics* dialogue box (described later), or
- dragging the *Scale* handle. This interactively scales the graphic. If the frame is too small to do this accurately, use the *Zoom* feature to enlarge your view of the frame, or

- double-clicking **on** the *Scale* handle (this scales the graphic to 100% and sets the aspect ratio to 100% – the aspect ratio is described later).

Resizing the frame scales the graphic from the edge of the frame. The other methods scale the graphic around the centre of the frame.

If *Lock aspect* (in the *Alter graphic* dialogue box) is ***off***, resizing the frame or dragging the *Scale* handle may change the X:Y aspect ratio. Using the Scale editable field or holding down *Ctrl* while dragging the *Scale* handle maintains the aspect ratio.

Moving graphics

You can move the graphic within the frame without moving the frame itself by:

- Dragging the *Pan* handle.
- Double-clicking **on** the *Pan* handle. This moves the graphic to the centre of the frame.
- Using the *Alter graphic* dialogue box. This allows you to change the X-Y coordinates of the graphic and is useful for large movements of the graphic.

If you have the *Alter graphic* dialogue box on screen while sliding the graphic with **Select**, you see the X-Y co-ordinates update as the graphic moves.

Rotating graphics

To rotate a graphic either

- drag the *Rotate* handle (hold down *Ctrl* to constrain the rotation to multiples of 45°), or
- double-click **on** the *Rotate* handle (this cancels any previously applied rotation to the graphic – it has no effect on any applied rotation of the frame), or

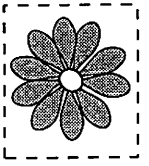
- type in an angle (in degrees) into the *Angle* editable box in the *Alter graphics* dialogue box.

All methods rotate the graphic around the centre of the frame. You can always rotate Draw files. If you have RISC OS 2, you can only rotate Sprites if *Dither graphics* is set in *Preferences* on the Icon Bar Menu. (See *2.16 Customising Impression* for details.) This option is not needed for graphics rotation in RISC OS 3.

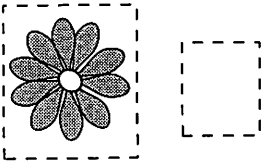
Linking graphics

Graphics can occupy a lot of memory. Where you require the same graphic in more than one place, it saves memory if they are linked. In this way, the graphic is stored only once but can be used in several frames. As the complete graphic is always stored, each view can show a different part of the same graphic.

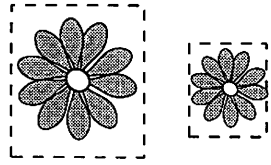
To link graphics, first create a frame and drop in the graphic.



Then, next time the graphic is required, create a blank frame.



Click **Select** on the original graphic and click **Adjust** on the blank frame. (This is the same sequence as linking text frames.) The complete graphic now appears in the second frame; the view in the first frame is unchanged.

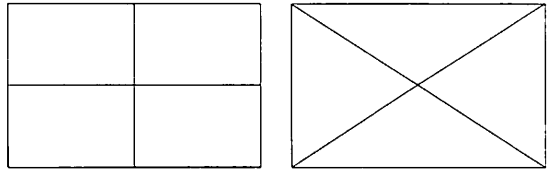


You can now re-size or crop the second view as normal.

The graphic is always stored separately from the frame information. This allows you to delete the original frame without affecting the second view of the graphic. Only when all frames that use the graphic are deleted is the actual graphic removed from memory.

Hiding graphics

Complicated graphics can be slow to redraw on the screen. To speed up screen updating you can hide graphics. Hidden graphics appear as vertical and horizontal crossed lines. (Graphics also not displayed when they have been saved to disc by a *Minimise memory* operation. In this case, the frame contains two diagonally crossed lines.)



Left: a 'hidden graphic' frame
Right: frame contents saved to disc to minimise memory.

You can either

- hide an individual graphic by using the *Alter graphic* dialogue box, or
- hide all graphics in the document by using *View ⇒ Hide all graphics.*

To restore a hidden graphic either

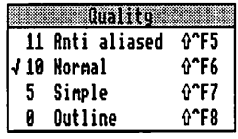
- cancel *Hide graphic* in the *Alter graphic* dialogue box or

- choose *View ⇒ Show all graphics.*

To restore a graphic that has been saved to disc click in the frame.

Note that hidden graphics are not printed; graphics saved to disc by minimise memory are printed.

Quality menu option



Complicated illustrations can take several seconds to redraw on screen. The *View ⇒ Quality* menu option lets you control the amount of detail shown and hence control the speed of redrawing.

(You can also display this menu from the Toolbar.)

Quality controls illustrations prepared in ArtWorks or imported as Draw files. Changing the Quality setting only changes the appearance of the document on-screen; it has no effect when printing.

Quality 11 Anti-aliased – this displays illustrations in complete detail and anti-aliased. (This improves their appearance on-screen.) Redrawing is slightly slower.

Quality 10 Normal – again the illustration is shown in full detail but is not anti-aliased. (**Adjust**-clicking on the *Quality* tool directly selects *Quality 10.*)

Quality 5 Simple – line thickness is ignored; all lines are drawn the same width. Line dash patterns and end caps are ignored. ArtWorks graduated fills are shown as flat fills.

Quality 0 Outline – illustrations are shown purely as outlines (wire-frames) with minimal detail. However, this gives the fastest redraws.

Exporting graphics

Use *File ⇒ Save graphic* or *Save file* in the *graphic information* dialogue box (described later).

Sprites are exported as *Draw* files (as *Draw* files can contain *Sprites*). Files imported using loaders (such as TIFF files) are exported as *Sprites* or *Draw* files. Other types of graphic are exported as the same file type used to import them.

Object Linking & Embedding (OLE)

This provides a simple way to modify a graphic in Impression. Simply hold down *Ctrl* and double-click in the graphic frame. Impression exports it to a suitable external application (for example, *!Draw* for draw files). Impression even loads the application if it is not already on the icon bar.

After you have made any changes, close the window in the external application. This usually displays a Save box – click on *OK* and the graphic is returned to Impression. (Most applications follow the convention of having an *F3* short-cut, so you can transfer the graphic back to Impression by pressing *F3-Return*.) The graphic is displayed at the previous scale and position.

Points to note

- OLE can only load an application if it knows where it is. Usually this means that the application's icon has been displayed in a directory window (even if you later closed the directory window).
- To return the graphic to Impression just click on *OK*. Altering the filename shown in the Save box in any way breaks the link to Impression.
- Graphics are transferred using a disc file. OLE may fail if there is insufficient space on your disc.

If you are using floppy discs, you may be prompted to swop discs.

- **If you are using Acorn's '3-D new-look'**

  If you find that some applications crash when transferring files back to Impression using OLE, run *BorderUtils* (supplied on the new-look disc).

- **If you have RISC OS 2:**

  Many types of graphic load back into the application that created them. For example, Equasor format files load back into Equasor.

  Other types load back into *!Draw*. (This is controlled by the application that created the file and not by Impression.) The RISC OS 2 version of *!Draw* may crash when sent files in certain formats. (Technically, those containing unknown tag objects.) Unless you are sure that the graphic will load successfully, save the document before using OLE.

  This problem applies only to RISC OS 2. There is no problem with the RISC OS 3 version of *!Draw*.

Note to other developers

For more information on OLE refer to the on-line help as this contains many technical details.

The *Alter graphics* dialogue box

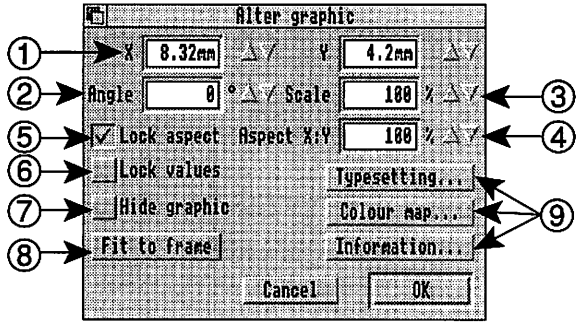
Call up this dialogue box by:

- double-clicking inside a graphics frame, or,

if the selected frame is a graphic frame,

- *Ctrl-F11*, or
- *Frame ⇒ Alter graphic*, or
- **Adjust**-clicking on the *Alter frame/graphics* tool.

Displaying this dialogue box closes the *Alter frame* dialogue box if this is open. You can edit while the *Alter graphics* dialogue is on screen. Selecting a non-graphic frame automatically closes the *Alter graphics* dialogue box.



① X & Y

These show the distance of the bottom-left corner of the graphic from the bottom-left corner of the frame. These can show negative values when you are showing only a part of the graphic.

Clicking on the bump icons moves the graphic in steps of $^1/_8$ th of an inch (approximately 3mm). Clicking the icons moves the graphic immediately.

② Angle

This allows you to rotate the graphic by any angle between ***0°*** and ***360°***. (You can also rotate the graphic using the *Rotate* handle on the graphics tool.)

③ Scale

This shows how the graphic has been scaled relative to its original size. ***200%*** means the graphic is twice its original size.

④ Aspect X:Y

This shows the 'fatness' or 'thinness' of the graphic. It measures how the graphic is scaled in the horizontal direction relative to the vertical direction (as set by the Scale field). When *Aspect X:Y* is set to ***100%*** the graphic is equally scaled in both directions. That is, a square in the original graphic remains as a square in the scaled graphic. Numbers smaller than ***100*** in the *Aspect X:Y* field make the graphic thinner than the original, larger numbers make it fatter.

The appearance of the graphic on the screen may be distorted by the aspect ratio of the pixels displayed by the monitor.

Notes on *Scale* and *Aspect X:Y*

Altering either value rescales the graphic around the centre of the frame.

To show a graphic at its original shape and size, set both the *Scale* and *Aspect X:Y* fields to ***100%***.

Acorn sprites do not store any information about the original size of the bitmap and so Impression treats sprites as always being stored at screen resolution no matter where they originally came from.

⑤ Lock aspect

When it is on, the graphic keeps the aspect ratio set in the *Aspect X:Y* field no matter what the shape of the frame. This is a useful protection against accidentally changing the aspect ratio when changing the size of the frame with **Adjust**. It also stops the aspect ratio changing when you drag the *Scale* handle.

⑥ Lock values

Lock values is similar to *Lock aspect*. With it set, you cannot use the mouse to slide the graphic around in the frame. It also locks the *Scale*. Even if you drop another graphic into the frame, the scaling is unchanged.

⑦ Hide graphic

This controls whether or not the graphic is shown in the document. Some graphics take a long time to re-draw, which can slow down the response time of the program, so it is useful to be able to hide the picture once you have made sure that it looks right. There is also an option in the *View* menu to hide all graphics.

Note that hidden graphics do not print.

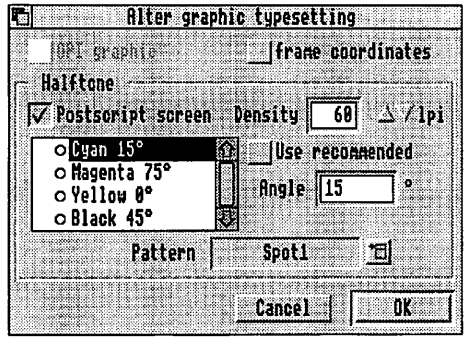
⑧ Fit to frame

Fit to frame is a quick way to resize the graphic to fill the frame. If *Lock aspect* is ***off***, the graphic is rescaled both horizontally and vertically to fill the frame. If the switch is ***on***, the graphic is resized to fit the frame without changing the aspect ratio.

⑨ Typesetting/Colour map/Information

These display extra dialogue boxes, described below.

Typesetting dialogue box



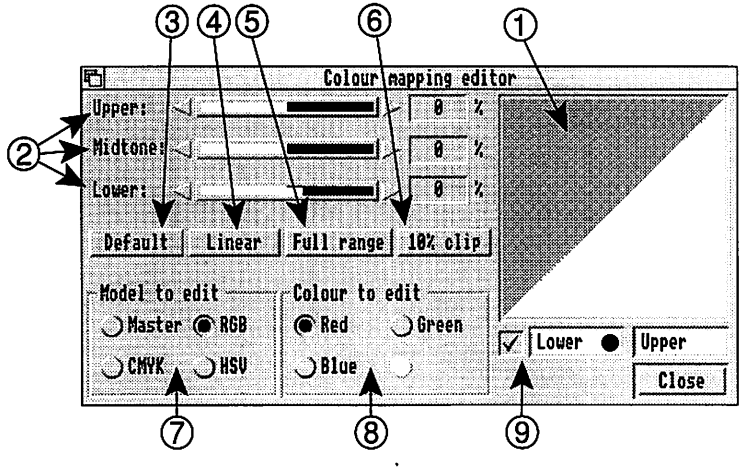
This is used when outputting to a PostScript device such as a typesetter. It overrides the settings in the *Print* dialogue box for *Angle*, *Density*, and *Spot pattern* for this individual graphic. (See the description of the *Print* dialogue box in *3.4 Printing* for more details of these functions.)

Frame co-ordinates displays information about the graphic.

Colour map dialogue box

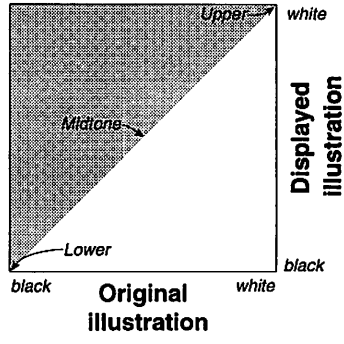
This lets you alter the brightness, contrast and colour balance of graphics. Impression remembers the original contrast and brightness and you can return to the original values at any time by clicking on *Default* ③.

It also lets you change the foreground and background colours of monochrome illustrations. For example, you can change a black-and-white illustration to a red-and-yellow illustration. You can also convert a coloured illustration to a monochrome illustration.



① Colour map

This illustrates the effect of changes to the sliders ②.



The graph represents a map of the brightness levels. The default straight line means that dark colours map to dark (lower left corner) and light colours map to light (upper right corner) and all intermediate shades are mapped linearly.

- Altering *Upper* alters light colours.
- altering *Lower* alters dark colours
- altering *Midtone* alters the brightness of midtones (and has an effect similar to altering the gamma brightness values).

② Sliders

These let you adjust the colour balance. The three sliders operate in the same way.

- 0% means no modification. For example, setting *Midtone* to 0% means a mid-tone shade in the original appears as the same shade on screen and when printed.

- To increase the contrast select *Master* and increase *Upper* (make it positive) and decrease *Lower*.

- Conversely, to reduce the contrast select *Master* and decrease *Upper* and increase *Lower*.

- To increase the brightness select *Master* and increase *Midtone*.
  With the colour model options, this action increases the proportion of the selected colour. With the RGB model, this also increases the brightness. With this CYMK model this decreases the brightness.

- To decrease the brightness select *Master* and decrease *Midtone*.
  With the colour model options, this action decreases the proportion of the selected colour.

③ Default

This cancels any colour correction applied to the graphic. If you have been experimenting with changing the colour map, *Default* provides a quick way to return to the original values.

④ Linear

This sets *Midtone* to 0% and gives a linear colour map. It does not change *Lower* or *Upper*.

⑤ Full range

This sets *Lower* and *Upper* to 0%. *Midtone* is unchanged.

⑥ 10% clip

For some applications (such as scanned photographs that will be typeset) it is undesirable for illustrations to contain pure white or pure black. *10% clip* reduces the contrast range to 10% to 90% black.

⑦ Model to edit

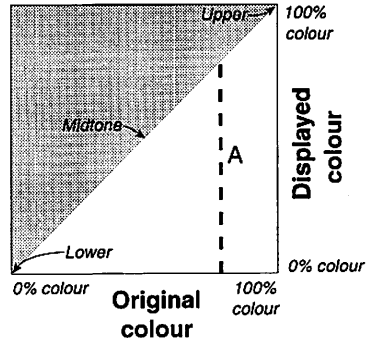
Master lets you adjust the overall graphic brightness in one operation. Its main use is to make the graphic lighter or darker or increase or decrease the contrast.

The other options select a colour model and let you adjust the individual colour components by selecting from the *Colour to edit* field ⑧. Some buttons may be greyed if the colour model is not applicable for this graphic:

- **RGB** is the usual model for normal sprites, draw files, and so on,
- **CMYK** is only available for CMYK sprites or for ArtWorks graphics,
- **HSV** is only available for ArtWorks graphics.

Each option only affects objects that use that colour model. For example, if you select *HSV*, moving the sliders modifies only objects defined using the HSV colour model.

Note:
By altering the various intensities of the individual colours, you can perform a wide range of colour correction. For example, when using an RGB sprite, altering the midtone of only the Blue colour tends to make the picture more blue or more yellow (the opposite of blue).



If the graphic uses only a few colours, dragging the sliders may appear to have no effect. For example, in the illustration above small changes to *Lower* have little effect on the 80% colour **A**.

Note that in the RGB colour model, black is defined as 0% each of red, green and blue. Similarly, white is 100% of each colour. Thus, changing any of the colours can also change white, black or grey shades.

In the CMYK colour model, each colour element (cyan, magenta, yellow or black) is independent so changing, for example, cyan does not affect black, white or greys. It just changes the proportion of cyan in the graphic.

⑨ Colour

This has two functions:

- Converting a multi-coloured graphic to monochrome (single-coloured). You cannot convert a sprite containing more than 256 colours ('deep colour' sprites).
- Changing the upper and lower colours of a monochrome graphic. Click on the colour fields to display the colour picker. (This is described in *2.12 Colour handling*.)

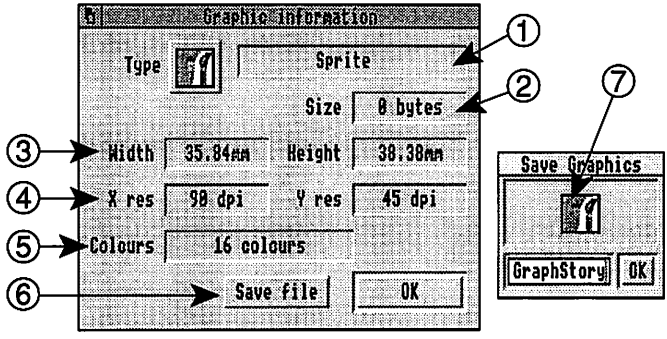
  Changing the colours provides a simple way to incorporate spot colours on graphics into a document that will be professionally printed. If one colour is white, you can change the other colour to be cyan, magenta, or yellow and then produce a separation for that process colour. The professional printing company can then print that separation in any colour ink. (There's more on producing separations in the *Commercial Printing Guide*.)

Impression preserves the original values for the graphic. This lets you cancel any changes made to the colour by deselecting this button.

On disc 7 are some tints generated in ArtWorks. You can drop them into a frame and change the colours to create background tints to your document.

Information dialogue box

This gives you information about the size and type of graphic shown in the selected frame.



① Graphic type

This tells you the graphic type (such as *Sprite* or *ArtWorks*).

② Graphic size

The amount of memory required to hold the graphic. This is particularly important for scanned images as high-resolution scans can consume large amounts of memory.

③ Dimensions

The original dimensions of the graphic. These are the same as the current size when the graphic is displayed at full size.

④ Resolution

This is blank unless the graphic is a sprite.

It shows the current resolution. Resolution is important when printing as using too low a resolution (below 60 dpi for a laser printer) gives poor quality results. If the sprite resolution is higher than needed for good quality reproduction, more memory than necessary is required.

Increasing the scaling of the sprite decreases the current resolution. For example, scaling a 90 dpi sprite to 200% of its original size reduces the effective resolution to 45 dpi. Conversely, decreasing the scale increases the resolution – a 90 dpi sprite becomes effectively 180 dpi when displayed at 50%. (This assumes you print the document at 100% – different print scaling also affect the effective resolution.)

Note:
It is unusual to require an effective resolution greater than 150 dpi, even for the highest quality typesetting.

⑤ Colours

This is blank unless the graphic is a sprite. It shows the number of colours in the sprite.

⑥ Save file

This duplicates *File ⇒ Save graphic*. It displays a Save box ⑦.

2.10 Master pages

This section covers:

- what are master pages?
- using master pages
- editing master pages
- creating new master pages
- *New master page* dialogue box
- *Alter master page* dialogue box

Related sections of this manual:

- *Alter chapter* dialogue box in *2.11 Chapters*

What are master pages?

The fundamental layout of your document is dictated by a ***master page*** or ***pages***. A master page acts like a template which has a pre-selected arrangement of frames, empty or containing text or graphics, that is reproduced on all the actual document pages (the ***normal pages***).

Normal pages, when created, are copies of the current ***master page***. The difference is that normal pages can be printed, whereas master pages exists only inside Impression.

All documents must, by default, have one master page, though different chapters can use different master pages. All pages in a chapter are based on the same master page (or pair of master pages).

Logos, messages, or graphics placed on a master page appear on every normal page that uses that master page. For example, if you needed a multi-column page layout, then you would choose a master page layout with text frames arranged as columns, linked so that the text story flow from the bottom of one column frame to the top of the next. (See below for a list of the pre-defined master pages. Linking text stories is described in *2.8 Frame handling.*)

Of course, new frames containing text or graphics can be introduced into any local pages throughout a document, and these may be altered at any time.

Master pages serve five main purposes:

- They allow a variety of different page sizes to be used in a document.
- They determine whether the pages appear as left/right pairs on screen or as single pages.
- They provide a high degree of control over the overall look of a document and allow simple changes to a master page to affect the appearance of entire chapters.
- Any changes you make to a master page are reflected in all pages that use that master page. This retroactive editing

is an important feature of Impression and gives it much of its flexibility.

- They simplify layout work because repetitive items need only be defined once.

The default master pages

A4 (210x297 mm) pages

A4 portrait one column, portrait

A4 port DPS one column, portrait, left/right pair

A4 por 2col two column, portrait

A4 2col DPS two column, portrait, left/right pair

A4 landscap landscape

A5 (148x210 mm) pages

A5 portrait single column, portrait

The default document uses master page ***A4 portrait***.

Using master pages

Changing to a different master page

You can change to another master page at any time. Use the ***Alter chapter*** dialogue box to change the master page. Remember that this changes all pages in the current chapter to be based on the new master page.

You can also select a different master page when you create a new chapter. For a different master page, change the *Master page* field in the ***New chapter*** dialogue box.

(See *2.11 Chapters* for details of the ***Alter chapter*** and ***New chapter*** dialogue boxes.)

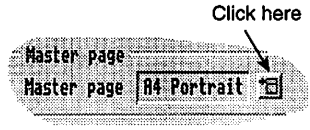
Example:

If you want to create a document using A5, portrait pages:

1 Open a new document. This displays the usual A4 portrait page (*A4 portrait*).

2 Open the ***Alter chapter*** dialogue box (*Edit ⇒ Alter chapter*).

3 Click on the menu icon.



This displays a list of available master changes.

4 From the menu choose *A5 portrait* and click on *OK*.

The document now uses A5 portrait pages.

Changing master page frames

On a normal page you **can**:

- delete a master page frame,
- make a local copy of the master page frame. (Use *Make local* in the *Alter frame* dialogue box.)

You **cannot**:

- move a master page frame, nor
- change its size. You can only move and resize master page frames on the master page itself.

Editing master pages

Before you can edit a master page you must open the master page window. Use

- *View ⇒ Master pages* or
- *Ctrl-Shift-F2.*

The window initially shows the current master page.

Master pages look like normal pages on screen. You can scroll around them and put frames on them containing text or graphics.

On normal pages you ***can***:

- enter text into master page ***blank*** frames.

You ***cannot***:

- enter text into master page ***text*** frames,
- edit text in master page ***text*** frames,
- change the graphic in master page ***graphic*** frames.

Any alterations made to the master pages are reflected throughout the document in all pages based on that master page. Herein lies the power of master pages. If a frame is re-positioned, or some text edited on the master page, then closing the master page window updates all pages based on that master page to reflect the change.

For more details of creating and editing master pages refer to *New master page* and *Alter master page* (described below).

Deleting master pages

You can delete unwanted master pages by displaying the master page window then using *Edit ⇒ Delete master page*. You can only delete unused master pages, never those used in the document.

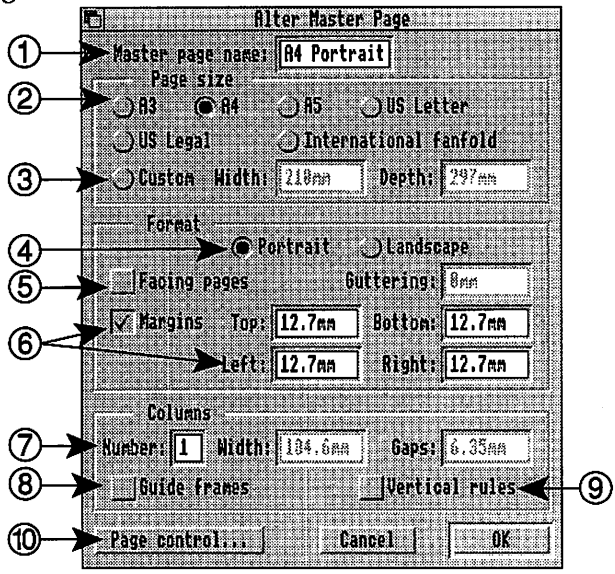
Deleting unused master pages does not make the document significantly smaller. The main use is when you have created a new master page based on an existing master page and want to delete the old page.

Master page summary

- The master pages can be seen only in the master page window, selected by *View ⇒ Master pages.*
- All pages in a chapter have to be based on a particular master page, or a particular left/right pair of master pages.
- Master pages, like normal pages, may have *blank*, *text* or *graphic* frames placed at any position.
- Alterations to master pages are reflected throughout a document.
- Blank frames, linked together on the master page, indicate the positions of flowing text in the main document.
- Create new master pages with the *New master page* or *Alter master page* dialogue box.
- The name or number of the master page is displayed in grey at the top-left corner of the master page in a master page window. The *Alter chapter* dialogue box shows which master page the current chapter is based on.
- Alterations to the master page do not affect the main document until either the master page window is closed, or you click in a normal page window.
- Use *Edit ⇒ Alter chapter* to change to a different master page.

New master page dialogue box

To display this dialogue box use *Edit ⇒ New master page* or *Ctrl-F7*. These are only available when viewing the master pages.


Alter Master Page
① Master page name: A4 Portrait
② Page size
A3 A4 A5 US Letter
US Legal International fanfold
③ Custom Width: 210mm Depth: 297mm
Format
④ Portrait Landscape
⑤ Facing pages Guttering: 0mm
⑥ Margins Top: 12.7mm Bottom: 12.7mm
Left: 12.7mm Right: 12.7mm
Columns
⑦ Number: 1 Width: 184.6mm Gaps: 6.35mm
⑧ Guide frames Vertical rules ⑨
⑩ Page control... Cancel OK

① Master page name

You can name master pages. This often makes it easier to identify them (for example, ***Letters*** for a master page with the correct layout for your letters). Names can be up to 11 characters long. *Spaces* and punctuation are allowed.

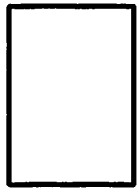
② Page size

These buttons select standard page sizes.

③ Custom page

If you want a non-standard page size, click on *Custom* and type in your own page size.

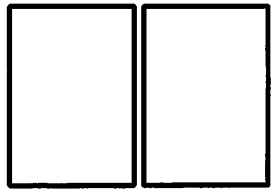
④ Format



Portrait *or upright page orientation*

Landscape *or sideways page orientation*

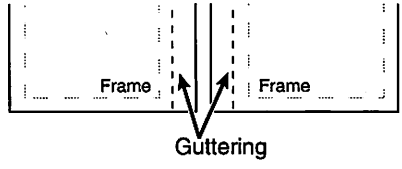
⑤ Facing pages



Facing pages

Selecting *Facing pages* allows the creation of pairs of master pages. These are shown as two pages side by side.

When *Facing pages* is selected, you may type in a measurement for the *Guttering* This is the additional space that is added to the inner margins to allow for binding the pages. This measurement is ignored when creating only single master pages.



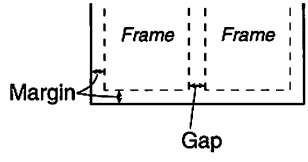
The right-hand page is a mirror image of the left-hand page.

⑥ Margins

These define the distance from the edge of the page to frames.

Note the difference between ***Margins*** and ***Gaps***:

- ***margins*** control the distance from the edge of the page,
- ***gaps*** control the distance between frames.



⑦ Columns

You can generate simple one frame master pages or pages with multiple columns.

Type the number of columns into *Number*. The column width field is updated as you type.

Gaps controls the space between frames. Again, this changes the *Width* measurement. Gap does not define the distance from the edge of the page to the nearest frame: this is controlled by *Margins*.

⑧ Guide frames

This creates guide frames rather than blank frames. If a master page requires both guide and normal frames, it is usually best to create the guide frames first. You can then add the blank frames to the page later and, if *Snap to guides* is ***on***, you can easily align them with the guide frames.

The advantage of placing guide frames (either now or later by creating new guide frames) on the master page is that, if you later move them, all frames in the document that are already snapped to them move to reflect the change.

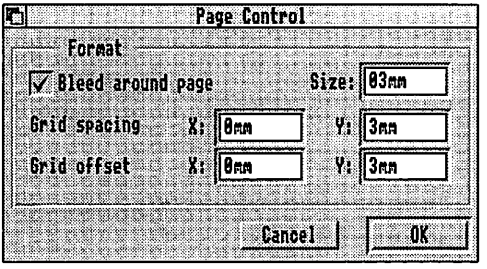
⑨ Vertical rules

When this is ***on***, the new page will have black lines between each column. These lines are 0.141 mm (0.006 in.) wide.

Note that this option has no connection with vertical rules set on the rulers. This option creates an inter-column line on a master page; vertical rules on the ruler draw lines in selected paragraphs.

⑩ Page control

This opens the *Page control* dialogue box:



Bleed around page

A Bleed is a margin (usually about 3mm) outside the normal page size. It is needed for documents that have text or graphics running off the page. The bleed area is cut off after printing. For more information, refer to the *Commercial Printing Guide.*

Grid offset & spacing

These options let you create a grid across the page. *Offset* sets the start of the grid relative to the top left of the page. *Spacing* is the distance between points on the grid.

Frames

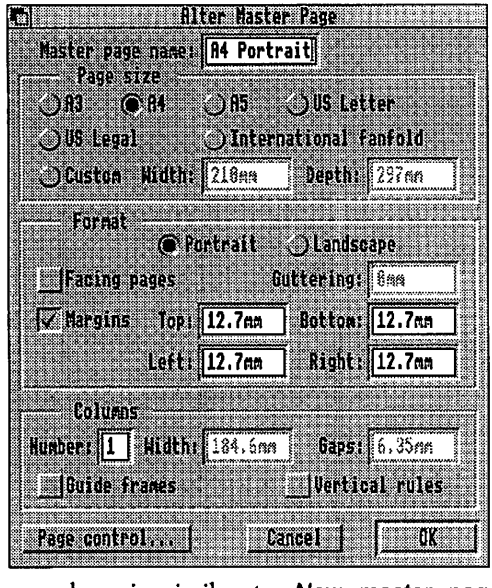
If *Snap to grid* is selected, moving or resizing the frame snaps it to points on the grid.

Text

Text snaps to the *Y* grid if the text is in a style with *Lock to page grid* set. (*Lock to page grid* is described in *Paragraph dialogue box* in *2.6 Styles.*) The *X* grid has no effect.

Alter master page dialogue box

To display this dialogue box use *Edit ⇒ Alter master page* or *Ctrl-Shift-A*. These are only available when viewing the master pages.



This dialogue box is similar to *New master page* already described. Use it to create a new master page based on an existing master page. Use the *Alter chapter* or *New chapter* dialogue box to change to using the new master page. (We suggest you give the new master page a different name to identify it from the existing master page.)

2.11 Chapters

This section covers:

- what are chapters?
- the *New chapter* dialogue box
- the *Alter chapter* dialogue box

Related sections of this manual:

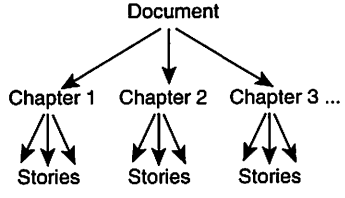
- *2.10 Master pages*
- *Automatic page creation* and *Flowing text stories* in *2.3 Text handling*

What are chapters?

Chapters in Impression are similar to chapters in a book. That is, they break the document into smaller sections. The advantages of chapters are:

- They speed up reformatting of text after changes. This makes working on large documents easier.
- They let Impression handle documents far larger than the available memory in your computer. Chapters that are not being worked on can be saved to disc. (There is more on memory management in *2.1 The basics.*)
- Different chapters can use different master pages. This lets you use different page sizes and layouts within a document. For example, index and contents pages often have a different layout to the main part of the document.

Impression documents are structured like this:



A simple document (like a letter) contains one story in a single chapter. A complex document contains several chapters each of which can have several stories.

Chapter numbering

Internally Impression numbers chapter numbers sequentially from ***1***. In the *New chapter* and *Alter chapter* dialogue boxes (described later), you can allocate a different number to a chapter. You would do this if you wanted to insert into the text a chapter number different to the internal chapter number. Use *Utilities* ⇒ *Insert* ⇒ *Current chapter number* to insert the chapter number into the text.

Deleting chapters

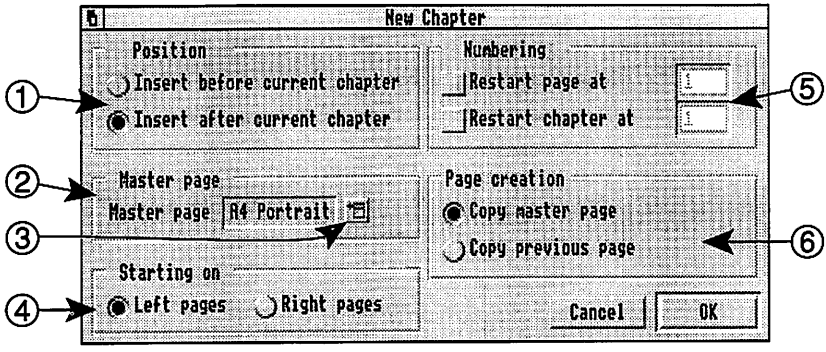
Use *Edit ⇒ Delete chapter* to delete the current chapter. (The current chapter contains the selected frame.)

We recommend that you save the document before deleting a chapter. If you change your mind or delete the wrong chapter, you can then retrieve the document from disc.

If the document contains only one chapter, you cannot delete that chapter.

The *New chapter* dialogue box

To display this dialogue box use *Edit* ⇒ *New chapter* or *Ctrl-F7*. Use this dialogue box to start a new chapter.



① Position

You can insert the new chapter either before or after the current chapter. (The current chapter contains the selected frame.)

② Master page

New chapters may be based on any master page. This lets you alter the page size or layout part way through a document by starting a new chapter. For example, an index usually has a different layout from the rest of a document.

To change the master page, click on icon ③; this displays a menu of master pages. Choose the new master page from this menu. Master page names and numbers are displayed in the top-left corner of the master page when viewed in the master page window. (See *2.10 Master pages* for information on the master page window.)

④ Starting on

Left pages
Right pages

These two options control how left/right pairs are displayed on the screen.

For many documents (such as this manual), new chapters always start on the right-hand page. For such documents, select *Right pages*. Other documents start on left-hand pages; for these, select *Left pages*.

⑤ Numbering

Restart page at

Selecting *Restart page at* and typing in a new page number restarts the page numbering for this chapter at that number.

If you want to continue the page numbering from the previous chapter, set this switch ***off***.

You can restart page numbering on any chapter boundary. This is particularly useful for sections that are numbered separately. For example, the introduction pages may be numbered in Roman *i, ii, iii* etc. the main text pages then starting from page *1*.

If you split a document into several files (not really necessary with Impression) then this mechanism can be used to start numbering each section at the required page number.

Page numbers may be displayed in Roman (upper or lower case) or conventional Arabic numerals. Use *Utilities* ⇒ *Insert* ⇒ *Current page number* to insert the page number into the text.

Restart chapter at

This is similar to *Restart page at* and lets you renumber chapters. Use *Utilities* ⇒ *Insert* ⇒ *Current chapter number* to insert the chapter number into the text.

⑥ Page creation

This option controls when a new page is automatically created. See *2.3 Text handling* for more information on flowing text stories and automatic page creation.

Copy master page

A new page is created when text fills a master page frame and there is no other master page frame for it to flow into.

The new page is a copy of the master page and contains only repeating frames from the previous page and master page frames. This is the normal option.

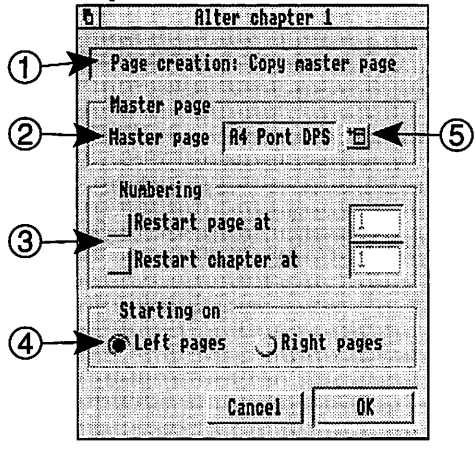
Copy previous page

A new page is created when text fills any frame, local or master page, and there is no other frame for it to flow into.

The new page is a copy of the previous page except that any local frames are empty. A graphic frame is only copied if it is a grouped frame (that is, it is one of several frames which have been grouped together). This is how pages are created in a previous software package, Impression Junior, and this option lets you work in a manner consistent with Impression Junior.

The *Alter chapter* dialogue box

To display this dialogue box use *Edit ⇒ Alter chapter* or *Ctrl-Shift-A*. This lets you change the page layout or page numbering of the current chapter.



① Page creation

This shows the current page creation rule – described further in *New chapter*.

② Master page

Changing this changes the master page used for the chapter. For example, you might want to change the number of columns on the page, or to change from single pages to left/right pages.

Click on icon ⑤ to display a menu of master pages.

③ Numbering

Restart page at

Selecting *Restart page at* and typing in a new page number restarts the page numbering at that number.

If you want to continue the page numbering from the previous chapter, set this switch ***off***.

Restart chapter at

This is similar to *Restart page at.*

④ Starting on (left pages - right pages)

This option is described in *New chapter.*

2.12 Colour handling

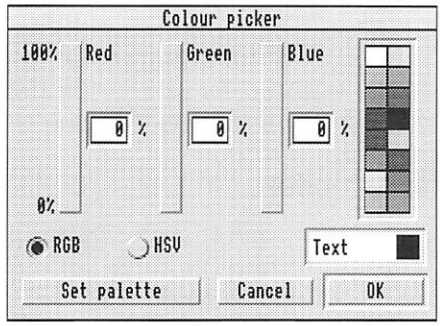
This section covers:

- the RGB, CMYK and HSV colour models
- using the colour picker

The colour picker

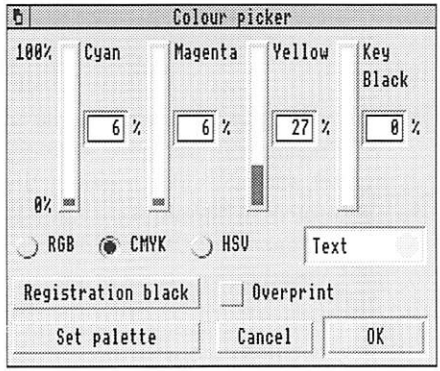
The Colour Picker appears whenever you click on a colour field in a dialogue box.

RGB colour model



This is the model used by the computer screen.

CMYK colour model



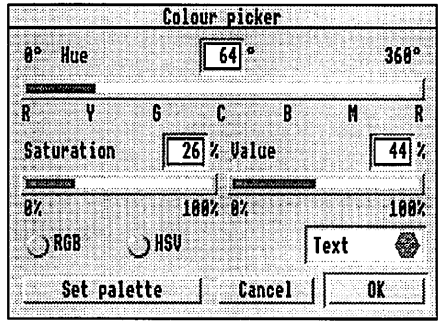
This is the colour model used by colour printers and printing presses. (*CMYK* are the colours of the four inks – *Cyan*, *Magenta*, *Yellow* and *Black* or *Key* – used to print full colour documents.) Printers use Black to reinforce dark colours that cannot be printed properly using only the Cyan, Magenta and

Yellow inks. Colours specified using CMYK may appear different on screen and when printed. This is because inks are not pure colours. For example, 100% Cyan+Magenta appears on screen as dark blue but is purple when printed.

When output to a CMYK device, colours defined in CMYK are output without modification. Colours defined in RGB or CMYK are converted to CMYK for output and may therefore show slight colour changes.

Some older colour printers use only Cyan, Magenta and Yellow inks (CMY colour model). The CMYK colour model is suitable for these. Set black to **0** when specifying colours.

HSV colour model



HSV describes colours in terms which are recognised by artists. *Hue* represents the pure pigment. *Saturation* is the amount of white added – the smaller the Saturation the greater the amount of white added. *Value* is the brightness of the colour or, put another way, the amount of added black. So Saturation and Value between them produce all the shades and tones of the basic Hue.

To get pure colours from the HSV model both Saturation and Value must be set to 100%. Hue gives the colour.

To get greys Saturation must be set to 0 and Value then gives the amount of white. Hue doesn't matter.

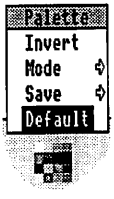
Altering colours in the Colour Picker

The RGB dialogue box shows the 16 colours on the default palette (eight greys, two blues, two greens, red, orange, yellow, and cream). To select a colour from this palette, click on the appropriate colour panel.

You may want a colour or shade that is not on the default palette. In this case, use the most suitable colour model for your particular application to precisely define a colour.

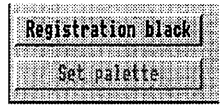
The colour shown on screen might be quite different from the colour defined. This is because the computer can only show a limited range of colours at a time, either 2, 4, 16 or 256 depending on the screen mode. In two-colour modes, like mode 0 and mode 18, all colours have to be shown as one of the two available colours, usually either black or white! The sixteen colour modes (modes 12 and 20) do a bit better with a palette of eight greys, two blues, two greens, red, orange, yellow and cream to choose from. However, many colours, such as cyan and magenta still have no really close match in this palette. Obviously for the best match to the edited colour use the 256 colour modes such as modes 15 and 21.

To see the colour you are editing more accurately in 4-colour and 16-colour modes click the *Set Palette* button. This sets the screen palette changes to include the exact colour you have just changed. Some colours already on the screen may change when you do this.



To return the colours back to normal just use the palette utility on the right of the icon bar. (Click **Menu** on the palette icon and then select *Default*.)

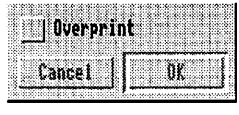
Registration black



This is a special colour defined as 100% each Black, Cyan, Magenta and Yellow. It is used for printing registration marks and alignment targets when producing typeset separations.

Do not use this for ordinary text – the printed results may be disappointingly blurred. Instead use it when you want include notes on each separation (such as document name or date).

Overprint



This is used for typeset separations.

Normally if you print (for example) black text on a cyan background, the outline of the text appears as a silhouette on the cyan separation. (The technical term is that the text ***knocks-out*** the background.) In theory, during printing the text exactly fits the silhouette in the background. In practice, there may be a slight misalignment and white unprinted lines appear at the text/background boundary. These areas are usually very small but can be noticeable when printing dark colours. (The technical term is that the printing is ***out of register***.)

Overprint gets round this problem by not knocking-out the background colour. Usually you only overprint black, which is sufficiently opaque to mask any underlying colour. Other colours can show colour shifts. For example *Blue* and *Yellow* overprinted gives *Green*.

2.13 Spell checking & the Dictionaries

This section covers:

- what a spell checker can and cannot do
- spell checking your document
- the main spelling word list
- user dictionaries
- abbreviation expansion
- hyphenation and the exceptions dictionary

Related sections of this manual:

- the *Hyphenation* effect in *2.6 Styles*
- *2.16 Customising Impression*

What a spell checker can and cannot do...

What it can do...

It can easily spot two of the most common mistakes, misspellings and mistyping.

The rules of English spelling are very complicated and there are many anomalies both in word roots and in the behaviour of endings. Very few people spell every word correctly every time. Impression lets you check spelling as you type and also check the entire document when it is complete. (These are described later.) It can suggest corrections for mistyped or transposed character sequences.

Even if you know how to spell words, it is easy to make mistakes when typing in the text. The main types of error are:

- transposing two letters (*exmaple* instead of *example*),
- omitting the space between two words (*aspace* instead of *a space*).

What it cannot do...

It cannot detect that you have used a valid word in the wrong context, for example:

"The **whether** is sunny today" (should be **weather**).

Nor can it detect typing mistakes if the result is a valid word:

"What time is **diner**?" (when you meant **dinner**).

A spelling checker helps you but you should always read through your documents carefully as a final check. You will find errors easier to spot from a printed copy rather than reading from the screen.

The WordWorks thesaurus and dictionary can tell you the meanings of words. To load WordWorks you can either double click on its file icon or choose *Utilities* ⇒ *Thesaurus*.

The main word list

The main word list contains almost 60,000 words, with each different word ending treated as a separate word. It is an English (UK) list and covers the basic vocabulary of an average person. Some terms peculiar to the Acorn and computing are included (such as *Archimedes*, *podule*, and *byte*) as are most country names and UK county and city names.

Loading the main word list

You can:

- Set *Spelling checker* in the Icon Bar Menu *Preferences*.

  If you then click on *Save* in *Preferences*, Impression always starts-up with the main word list loaded. (See *2.16 Customising Impression* for more details.)
- Choose *Utilities* ⇒ *Spelling* ⇒ *Dictionary*. You are asked if you wish to load the Main word list.
- Using any spelling function (such as *Check word* or *Check text*) asks you if you want to load the Spelling checker if it is not already loaded.

  This is probably the best way if you are short of memory as it means memory is only used when you actually require the word list.

Loading the main word list also loads the spelling checker and requires approximately 112 KB of RAM.

The error message ***No room in RMA*** means that the load failed because of insufficient memory. Remove any application programs (apart from *Impression*) currently loaded and try again. If necessary, reset the computer to free more memory.

User dictionaries

The main word list cannot include personal words such as names of people, roads and towns. For these, Impression provides ***User dictionaries***. You can have up to eight User dictionaries in memory simultaneously.

Each User dictionary, when loaded, occupies 8 KB of memory. This is sufficient for approximately 1,500 words. Usually just one dictionary is sufficient with, perhaps, others containing specialist vocabularies for use on specific documents.

Saving User dictionaries

This is described later in *Word list dialogue box menu*.

Loading user dictionaries

You can drop a dictionary file icon onto:

- the **Load target** of the *Word list* dialogue box (described later), or
- the *Modules set-up* window in Icon Bar Menu *Preferences* (described in *2.16 Customising Impression*).

The easiest way to load User dictionaries is to include them in Impression's *Auto* directory. (All suitable files in the *Auto* directory are loaded every time you load Impression.) To include a dictionary:

- save the dictionary to the *Auto* directory using the *Word list* dialogue box menu (described later), or
- use the *Modules set-up* window in Icon Bar Menu *Preferences* (described in *2.16 Customising Impression*).

Spell checking your document

You can spell check any word of three or more letters. Words can include apostrophes (') and hyphens (-).

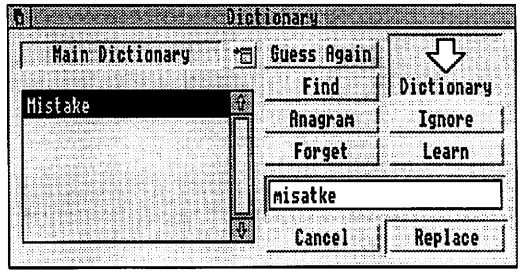
Checking individual words

You can check the spelling of the word containing the cursor using either

- *Utilities* ⇒ *Spelling* ⇒ *Check word* or
- the short cut *Ctrl-W.*

This check has three possible results:

- The word is correctly spelt. In this case, you hear a 'happy' beep.
- The word is not found in the dictionaries. Then:
  - you hear the normal 'error beep',
  - the word in the text is highlighted,
  - the Word list dialogue box is displayed with the incorrect word in the editable field, and
  - the guess option invoked. (The illustration shows *misatke* as a mistyped word. The spell checker has guessed it should be *mistake.*)



  The *Word list* dialogue box is described below.
- The word is only one or two letters long. Then you hear the 'error beep' and the word is ignored.

Checking as you type

This automatically checks each word as you finish typing it. (The word ends when you type a *Space, Tab, full stop* or *Return.* The word is not spell checked if you move off the word using the cursor keys or the mouse.) An 'error beep' warns you if the spell checker does not recognise the word. You can then

- ignore the warning (the word may be correct but not in the word list; for example, part of an address),
- correct or retype the word, or
- position the cursor in the word and use *Utilities* ⇒ *Spelling* ⇒ *Check word* or *Ctrl-W* to recheck the word and display alternatives.

You can select *Check as you type* from either:

- The Icon Bar Menu (*Preferences* ⇒ *Check as you type*). If you then click on *Save*, this becomes the default and applies every time you run Impression.
- *Utilities* ⇒ *Spelling* ⇒ *Check as you type.*

Checking the text

Impression has two options to check the text in a document. Both options are in the *Utilities* ⇒ *Spelling* submenu:

- *Check from cursor* (keyboard short cut *Ctrl-F*). This checks from the word containing the cursor to the end of the current story.
- *Check entire text.* This checks all the text in the current document.

If any unknown words (words not in the word list) are found, the *Word list* dialogue box is displayed with the unknown word in the editable field. (The *Word list* dialogue box is described below.)

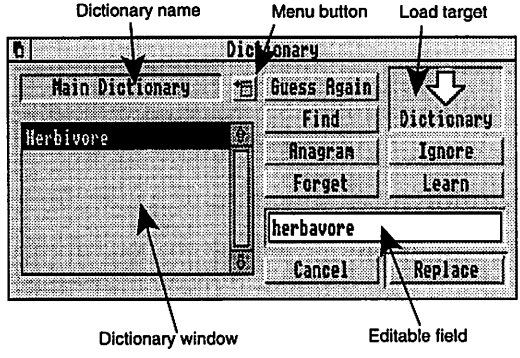
The *Word list* dialogue box

This dialogue box is used to:

- add and delete words from User dictionaries,
- load and save User dictionaries and
- spell check a word.

It also controls hyphenation and abbreviation expansion dictionaries (described later).

It is automatically displayed when *Check word at cursor*, *Check from cursor* or *Check entire text* finds a word not in the word list. It also has a keyboard short cut of *Ctrl-F8* or you can use *Utilities* ⇒ *Spelling* or *Utilities* ⇒ *Spelling* ⇒ *Dictionary*.



Menu Button

Either click on this or click **Menu** anywhere on the dialogue box to display the *Directory* dialogue box menu (described below). This controls which dictionary to display and the setting up, deleting, and saving of User dictionaries.

Guess
Guess again

This button performs a guess operation on the current word in the editable field. A list of any words that are found is displayed in the word list window.

After the operation, the button changes to *Guess again*, which provides a different guessing facility. Both *Guess* and *Guess again* highlight the top item in the list:

Guess uses *typo matching*. This assumes a single typing error such as two characters transposed or one missing letter or one extra letter, and searches the word list for close matches.

Guess again uses *fuzzy matching*. This performs a 'sound-alike' search through the word list noting any close matches.

Find
Find next

This button finds the closest match to the word in the editable field in the main word list and displays the word list from this point onwards in the scrolling list. If the word is in the word list, it becomes the top item in the list.

If the editable field contains * or # characters in the word in the editable field, the button performs a wildcard matching operation on words in the main word list. (This is an easy way to cheat at crosswords.)

represents one unknown character. * represents multiple unknown characters. For example:

`Comput#r` - lists the word **Computer**.

`Fr#a*` - lists all words that start with the letters **FR** and have an **A** as their fourth letter.

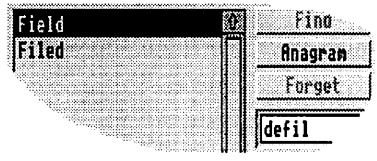
`Relev#nt` - shows whether the correct spelling is **relevent** or **relevant**.

If the number of words that match the current specification is more than can be stored in memory, the last word that was checked is noted and the operation is stopped.

The words up to this last word are displayed in the scrolling list and the button changes to *Find Next*. If the button is pressed again then the operation continues from the point at which it left off. The button is reset to *Find* if either all words in the word list have been matched against or you change the word in the editable field.

Anagram

This button performs an anagram operation on the current word in the editable field. This searches through the entire word list and lists words that have exactly the same letters as specified in the editable field.



Ignore

Pressing this button tells Impression to ignore this word and all further occurrences of it.

Possible errors include:

No room in RMA = there is insufficient free memory to create the ignore list.

Illegal character = a * (star) or # (hash) character is present in the word (hyphens are ignored).

String too short = word is only 1 or 2 characters long.

If the dialogue box is displayed because either *Check entire text* or *Check from cursor* found an unknown word, click on *Ignore* to resume searching. Searching continues from the next word in the text.

Learn

This adds the word to a User dictionary. If no User dictionaries are present then a default one is created.

Possible errors are the same as for *Ignore*.

Forget

This deletes the word from all User dictionaries. You can delete words only from User dictionaries - never from the Main word list.

Possible errors include:

Illegal character = a - (hyphen) , * (star) or # (hash) character is present in the word.

String too short = word is 1 or 2 characters long.

Word not found = there are no matching words present in any user dictionaries.

Unable to delete word = the word is in the main word list or does not exist in the dictionaries.

Replace
Insert

These buttons have an effect only if there is a highlighted word in the Word list window.

When it says *Replace*, the highlighted word in the Word list window replaces the selected word in the text. When replacing the word, notice is taken of the case of the letters. If the new word is longer, then the case of the new letters on the end reflects the case of the last letter of the old word.

When the button says *Insert*, the highlighted word is inserted into the text at the cursor position.

A short cut is double-click on the word in the scrolling list.

Editable field

This provides the word for all dialogue operations. When the dialogue box is brought up onto the screen, the cursor is placed into this field and, when spell checking, the unknown word is copied into this field. Amendments can be made to the word using the normal editing keys. The characters which you can type into the field are:

A-Z, a-z, * (star), # (hash), ' (apostrophe) and - (hyphen).

As you type into the editable field, the word list window displays the nearest match in the word list. If the word includes * or #, the scrolling list is not updated.

A space in the editable field acts as a terminator. For example, typing `'hello there'` into the editable field and clicking on *Find* performs a search on `'hello'`.

As with all editable fields, *Ctrl-U* is the easiest way to delete the entire line of text.

Word list window

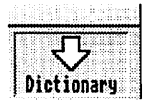
This contains a display of

- the chosen dictionary (you cannot display the WordWorks dictionary) or
- words found from other options such as a *Guess* operation.

A single click on an item in the list transfers it into the editable field and highlights that word in the list.

A double click is the same as pressing the *Insert/Replace* button or pressing *Return*.

Load Target



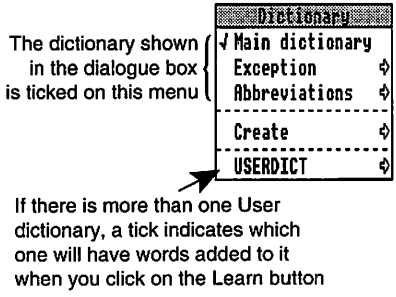
You can load any previously saved *User*, *Exception* or *Abbreviation* dictionary by dropping its file icon onto the load target.

(*Exception* and *Abbreviation* dictionaries are described later.) If the file is recognised then it is loaded in. Dictionary filenames can only contain the characters **A-Z** or **a-z**.

The error message ***No room in RMA*** means that there is no space for the word list in memory.

Word list dialogue box menu

Click **Menu** on the *Word list* dialogue box to display this menu:


Dictionary
√ Main dictionary
Exception
Abbreviations
Create
USERDICT
The dictionary shown in the dialogue box is ticked on this menu
If there is more than one User dictionary, a tick indicates which one will have words added to it when you click on the Learn button

There may be up to eight user dictionaries loaded, and each of them will have a menu option. (In the above example, there is one user dictionary loaded called *USERDICT*.) If you click on the name of a user dictionary in this menu, a tick appears against the name. Then any words you add using *Learn* in the *Word list* dialogue box are added into that dictionary. This is useful if you have more than one User dictionary.

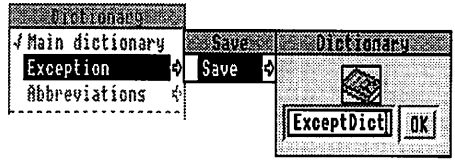
Main dictionary

If you choose this option the word list window shows entries the Main word list and any User dictionaries.

Exception

If this option is chosen, the word list window shows the hyphenation Exception dictionary (described later). If the hyphenation program is not present, a warning box appears allowing you to load it in.

Save on the submenu lets you save the Exception dictionary.



Either:

- drag the icon to a directory window, or
- click on *OK*. This saves the dictionary to Impression's *Auto* directory and it will be reloaded every time you load Impression. You only need to save a dictionary to the *Auto* directory once. Any future changes are automatically incorporated into dictionaries in the *Auto* directory whenever you quit Impression.

Abbreviation

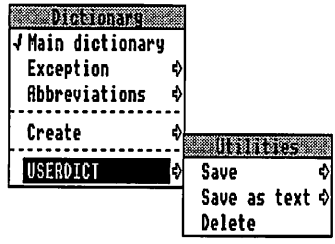
This refers to the Abbreviation dictionary (described later) and operates in the same way as *Exception*.

Create

This lets you create up to eight User dictionaries by moving onto the submenu and typing a name for the user dictionary. The name can be up to 10 letters long and can only contain **A-Z** or **a-z**. You cannot use numbers.

Pressing *Return* or clicking **Select** creates a User dictionary with the given name.

User dictionaries



Save lets you save the User dictionary. Either:

- drag the icon to a directory window, or
- click on *OK*. This saves the dictionary to Impression's *Auto* directory and it will be reloaded every time you load Impression. You only need to save a dictionary to the *Auto* directory once. Any future changes are automatically incorporated into dictionaries in the *Auto* directory whenever you quit Impression.

Save as text lets you save the dictionary as plain text. You can then edit the file using applications such as *Edit*. Give the modified file a suitable name and drop its icon on the load target on the *Word list* dialogue box. This creates a new User dictionary. The name can be up to 10 letters long and can only contain **A-Z** or **a-z**. You cannot use numbers.

Delete removes this User dictionary.

Abbreviation expansion

When typing a long document, you often find that you are typing many of the same words or phrases repeatedly. Impression offers a method of speeding up your typing by letting you define abbreviations for often used phrases, which are then automatically expanded as you type. For example the phrase ***for example*** could be abbreviated to ***eg***. Then, every time the word ***eg*** is typed on its own, it is expanded to ***for example***.

Use *Utilities* ⇒ *Abbreviations* ⇒ *Dictionary* to display the Abbreviations dictionary. Enter abbreviations in the format

```
eg for example
```

Important: the abbreviation must be a single word. Impression substitutes everything after the first space (***for example***) for the word before the first space (***eg***).

The Abbreviations dictionary can be automatically loaded when Impression starts up. See *Word list dialogue box menu* for details.

To turn on abbreviation expansion, use *Utilities* ⇒ *Abbreviations* ⇒ *Expand as you type*. You can also customise Impression to start-up with this option set. (Set *Expand abbreviations* in *Preferences* on the Icon Bar Menu. See *2.16 Customising Impression* for more details.)

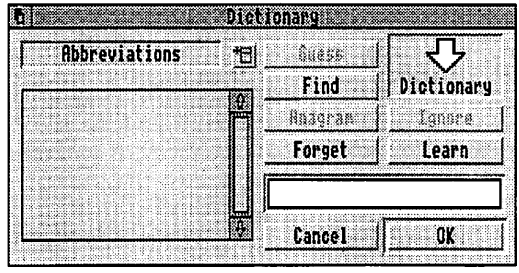
One particular use for this option is expanding frequently used, long telephone numbers. By entering, for example, ***tn1*** as an abbreviation for ***010 1 415 684-7729***, you not only save yourself typing but also ensure that the number is correct each time it is used. (When typing it is very easy to transpose two numbers such as *7792*.)

Abbreviations are only expanded if they are terminated by a *space, full stop, Tab* or *Return*. If you move off the word using the arrow keys, the abbreviation is not expanded. Abbreviations are not expanded if preceded by a character such as a bracket. Also, they are case-sensitive – in the examples above, only ***eg*** and ***tn1*** would be expanded; ***Eg*** or ***TN1*** would not.

Adding an abbreviation

You can not only expand abbreviations but also substitute one word for another during typing. For example you can substitute ***don't*** (with the correct apostrophe character) for ***don't***.

1 Use *Utilities ⇒ Abbreviations* to display the Abbreviations dictionary in the dialogue box.



2 Type

```
don't don
```

To enter the ' character hold down *Alt* and type *145* on the numeric keyboard on the right of the keyboard.

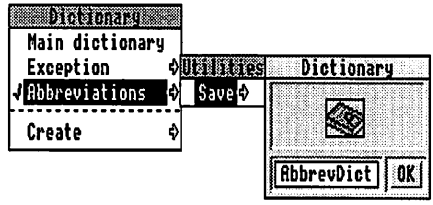
Type the final `t`.

The editable field looks like this:

(The apostrophe is shown incorrectly if you have RISC OS 2.)

3 Click on *Learn* to add the word to the dictionary:

4 If you want to save the dictionary, click **Menu** on the dialogue box. (Usually you will want to save the dictionary so that you can reuse it in the future.)



Drag the file icon to a directory window if you want to save the dictionary as an ordinary disc file. You will have to reload the dictionary into Impression if you want to reuse it in the future.

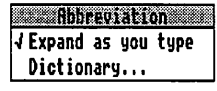
It is more convenient to save the dictionary to Impression's *Auto* directory. It will then be automatically loaded whenever you start Impression. Click on *OK* to save to the *Auto* directory.

(If, in the future, you make changes to dictionaries loaded from the *Auto* directory you do not need to save them. Impression automatically updates auto-loaded dictionaries when you *Quit* Impression.)

5 You can now close the dialogue box. (Click on *OK*.)

6 Lastly, you need to enable abbreviation expansion. You can either

- choose *Utilities* ⇒ *Abbreviation* ⇒ *Expand as you type*. A tick against *Expand as you type* shows when abbreviation expansion is enabled:



  This enables it temporarily – it is not enabled when you next load Impression.
- choose *Expand abbreviations* in *Preferences* on the Icon Bar Menu. If you then click on *Save* you enable this option and also make it the default so it applies every time you load Impression.

Now, whenever you type ***don't***, Impression substitutes ***don't***.

Hyphenation

A word that runs over the end of a line can be either moved to the next line or split over the two lines and the two parts separated by a hyphen. Hyphenation is the splitting of words over two lines.

If you do not wish to use the automatic hyphenation module, it need not be loaded. This saves about 17KB of memory. Words can also be hyphenated using soft hyphens; these are described later.

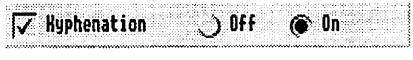
Impression can automatically load the hyphenation module when it starts up by setting *Hyphenator* in the Icon Bar Menu *Preferences*. See *2.16 Customising Impression* for more details.

If the hyphenation module has not been automatically loaded, you can do so from the *Word list* dialogue box menu (described earlier). Choose *Exception*. You are asked if you wish to load the hyphenation module and Exception dictionary.

Using hyphenation

Hyphenation is used when a word:

- does not fit at the end of a line, and
- is in a style with the *Hyphenation* attribute set.



Impression first checks to see if the word is in the Exception dictionary. If not it attempts to apply its own built-in hyphenation rules to the word. The hyphenation system uses a combination of word list look-up and a sophisticated hyphenation rule method. In addition you may specify the exact position of hyphenation points in any word by using the hyphenation exception dictionary.

Of course, not every word that does not fit is hyphenated. It depends on a variety of factors. The larger the gap left at the

end of the line by a word not fitting, the more likely it is to hyphenate. Also if there are hyphens already at the end of previous lines then it is less likely to hyphenate as a run of hyphens is undesirable.

Only if the ideal conditions are met **and** suitable hyphenation points in a word can be found will the word be hyphenated.

Generally, the narrower the columns of text, the more necessary it is to hyphenate text. Also, fully justified text benefits more from hyphenation as it helps reduce large gaps between words.

Special cases

- If a single word is too long to fit onto a line, it is always hyphenated.
- Words shorter than 4 characters are never hyphenated.
- Words longer than 32 characters are forcibly hyphenated.
- Any non-alphabetic character or hyphen already in the word means that the word will not be hyphenated.
- The last word in a paragraph is never hyphenated.
- A word containing a soft-hyphen (*Ctrl-hyphen*) will be hyphenated at the soft-hyphen.

Special Words

Some words are special cases where the point of hyphenation depends on the context in which the word is used. For example:

I give you a pres-ent.
I pre-sent you with this.

In such cases the word should not be automatically hyphenated. Such words are entered into the Exception dictionary with no hyphenation points present. If hyphenation is required then this should be entered manually using a soft hyphen (described below).

Adding words to the Exception dictionary

Words are added to the Exception dictionary in the same way as they are added to other dictionaries. The word should be typed into the editable field as normal, and any hyphenation points indicated by a number (1, 3 or 5 with 1 being the worst point and 5 being the best). For example:

```
night3mare
```

would make sure the word *nightmare* is only hyphenated between *night* and *mare*.

Click on *Learn* to add the word to the dictionary.

Deleting words from the exception dictionary

To delete a word, click on the word in the dictionary window to put the word in the editable field, then click *Forget*.

Soft hyphens

A soft hyphen is inserted in the text by pressing *Ctrl-hyphen* (*Ctrl* plus the - key). This special character allows you to override the automatic hyphenation on any required word or to force hyphenation when the hyphenation module is not present.

When a word is likely to be hyphenated because it appears at the end of a line, insert the soft hyphen at the point where you want the word to hyphenate. In the example word *present* you might put a soft hyphen between *e* and *s* (if that is correct for the context). If the word is hyphenated, the break will be between *pre* and *sent* and the soft hyphen replaced by a normal hyphen. If the word is not hyphenated (later edits may move the word to the middle of the line), the soft hyphen is invisible and has no effect.

If you step the cursor through a word containing a soft hyphen, you will see it pause at the soft-hyphen. This is because the soft hyphen is a character in the word even though it is invisible.

Often you want the whole document to be automatically hyphenated. (Set *Hyphenation* in *Normal* style to do this.) Sometimes you will find that a word has hyphenated when it would be better unhyphenated. The easiest way to stop a word hyphenating is to insert a soft-hyphen at the end of the word. Move the cursor after the last character and type *Ctrl-hyphen* (*Ctrl* plus the - key).

2.14 Mail merging

This section covers:

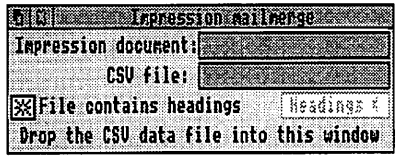
- using the *Start mail merge* menu command
- mail merging using *Start mail merge*
- inserting merge commands from CSV files
- using the *Merge command* menu option
- mail merging from a database

Mail merging

Impression has a simple but very flexible method of mail-merging. You insert merge commands into a document at the required places. Impression can then communicate with a database program or use its own merge facility. The merge commands in the document are replaced by data from the database or a suitable data file and the document printed. This process continues until either all the mail-merge records have been processed or you stop the process.

Start mail merge menu option

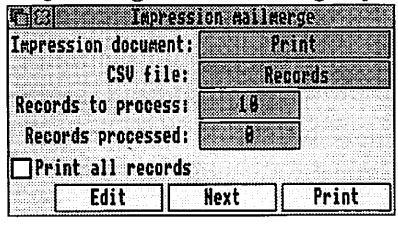
Use *Utilities* ⇒ *Start mail merge* to display a small dialogue box:



Drop a CSV file onto the dialogue box. An extra button *Start merge* then appears in the bottom corner of the dialogue box.

Select *Headings* if the first line of the file is a list of headings (field names). (See *Mail-merging using Start mail merge* for more details of field names.)

Click on *Start merge* to begin the mail merge operation.



Impression replaces the Merge commands with the first entry in the CSV file.

Click on *Print* to print this document. You can click on *Print* again to print another copy of this entry.

Click on *Print all records* and then *Print* to print all the remaining entries in the file.

Click on *Next* to replace the Merge commands with the next entry in the CSV file. Press *Next* again if you don't want to print this entry.

Click on *Edit* if you want to edit the currently displayed document. This quits the mail merge operation but retains the currently merged data. If you save this document to disc, remember to change the file name. If you keep the same filename, you will overwrite the original document.

Mail-merging using *Start mail merge*

Impression includes a simple mail-merge facility accessed from *Utilities ⇒ Start mail merge*. (The menu option is described earlier.)

Before running mail-merge you must prepare a suitable data file in ***CSV*** format. This is a common file format used by most database programs. The filetype must be CSV (if you have RISC OS 3, use the filer menu to change the type if necessary). The format is:

```
data field 1,data field 2,etc.
```

with commas separating each field (hence, ***Comma Separated Value – CSV***). Enclose the field in sexless double quotes (") if it includes a comma (for example, `"One,two"`). Use `\N` if you want a *Return* character in the field.

At the head of the file should be a list of field names. These names should match those in the Impression document merge commands. For example, a simple file might have three fields:

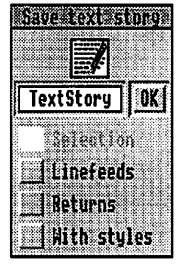
`Name,Telephone,Room` *Return*

Note that there is no comma after `Room`. This tells Impression that this is the end of the field names.

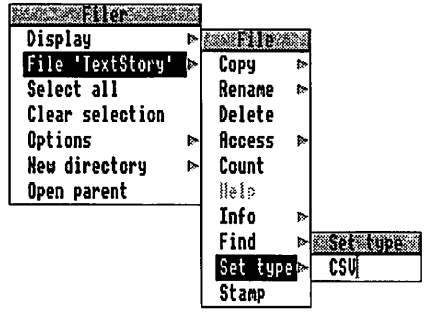
The data for merging comes after the field names. A simple file with just two sets of data might look like this:

```
Name,Telephone,Room Return
John,26,B12, Return
Kate,38,T3
```

You can prepare files using Impression. Save them using *File ⇒ Save text story* and reset all save options:



After saving the data to disc you can use the filer to change the filetype to ***CSV***.



(This assumes you have RISC OS 3. If your computer is fitted with RISC OS 2, you have to change the file type using the command line – refer to the *User Guide* supplied with the computer for details.)

If you later reload the file into Impression for further editing, ensure that *Smart quotes* in *Preferences* on the Icon Bar Menu is ***off***. If this option is ***on***, the sexless quotes "" get changed to true quotes “”. See *2.16 Customising Impression* for details of *Preferences*.

Now you need to create your Impression document putting merge commands where you want to insert data from the CSV file. Use the field names as merge commands. For example, a simple letter to John and Kate might look like this:

```
To <Name> room <Room>
From Mark
Your extension number will change on Thurs-
  day to 3<Telephone>.
```

When you merge the first record, the data from the CSV file replaces the merge commands and the letter reads:

```
To John room B12
From Mark
Your extension number will change on Thurs-
  day to 326.
```

An easy way to insert merge commands using CSV files

1 Display the *Start mail merge* dialogue box.

2 Drop the CSV file onto the dialogue box. (The CSV file must contain a headings line.) This ungreys the *Headings* option.

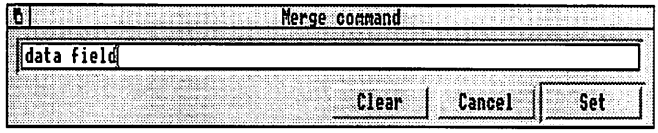
3 Position the cursor where you want to insert the Merge command.

4 Click on the arrow to the right of *Headings*. This displays a menu of available field names.

5 Choose the required field name from the menu. Impression inserts the correct format Merge command for that field name into the document at the cursor.

Merge command menu option

Use *Utilities* ⇒ *Merge command* to display this dialogue box:



Use this dialogue box to enter mail-merge commands into the document. Merge commands are inserted at the cursor, so reposition the cursor if necessary. Type the required merge command (up to 250 characters) into the editable field. (In the illustration, this field contains *data field*.)

Click on *Set* to insert the command into the document. Merge commands are shown in the document as *<Field name>*.

Click on *Cancel* to close the *Merge* dialogue box and ignore any changes made to the editable field.

Click on *Clear* to delete the merge command to the right of the cursor from the document. You can also delete merge commands using any of the delete keys.

Mail merging using database applications

Merging is entirely under the control of the database application. The database communicates with Impression whenever a *<Field name>* command needs replacing with record data.

Impression sets no restrictions on the format of the merge commands, which are entirely database dependent. For this reason, you should refer to the documentation supplied with the database for merge command syntax.

Other software developers wishing details of the ***Impulse*** inter-application command language used by Impression should contact Computer Concepts.

2.15 Contents & Index Generation

This section covers:

- creating a list of contents
- creating an index chapter

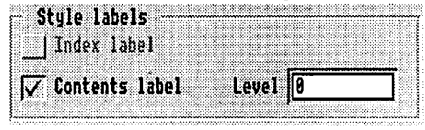
Related sections of this manual:

- *2.4 Effects, Styles & Rulers*
- *2.11 Chapters*

Many aspects of contents & index generation are easier to describe by example. The sample document *Index* on the Publisher discs shows you how to create appropriate styles and select appropriate master pages.

Compiling a list of contents

Before you can compile a list of contents you must mark those words and phrases you want include in the contents. Use the *Contents label* attribute in the Style Editor for this. (The Style Editor is described in detail in *2.6 Styles*.)



Any text in a style with this attribute set will be included in the contents list. (The predefined styles *Main Heading* and *Sub heading* already have this attribute set.)

Associated with *Contents label* is *Level*. This lets you use different styles when creating the contents list to show the relative importance of different entries. For example, *Main Heading* has level **1** set; *Sub-heading* level **2**. Impression has 16 levels of contents style, **0** to **15**.

To use levels you need to create one or more styles called ***ContentsN*** where ***N*** is the level number. (***Contents1*** for level **1** for example.) Note: the *Contents* styles affect how entries appear in the contents list – they have no affect on text in the main part of the document.

Using levels is optional. Impression substitutes *Normal* style for any missing *Contents* styles.

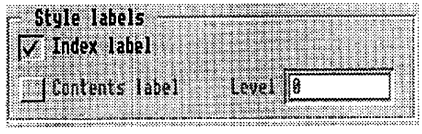
Use *Utilities* ⇒ *Compile contents* to display the *Compile* dialogue box (described later). This creates a new chapter at the beginning of the document containing a list of contents. Entries can contain any character including spaces but leading and trailing spaces are removed before they are entered in the contents list. Each entry is followed by a space, a *Tab* character and then the page number on which it appears. The whole line has the style *ContentsN* (if defined) applied over it.

Styles with the *Label* attribute set do not need to have any effect on the format of the text to generate entries in the

compiled chapters. For instance, you may have marked some text in *Sub-Heading* style and subsequently applied another style over it so that the effects of the *Sub-Heading* style are completely hidden. Any text in *Sub-Heading* style will still appear in the contents pages.

Compiling an index

This is similar to compiling a list of contents. You first mark text for inclusion in the index by applying a style with the *Index label* attribute set.



Usually you would create a special style (*Index* is a sensible name for it) with just the *Index label* attribute set. However, it can be useful temporarily to set the text background colour for the index styles. The coloured background shows you which text will be included in the index. It is up to you to decide which words and phrases you want in the index by applying the *Index* style to those words.

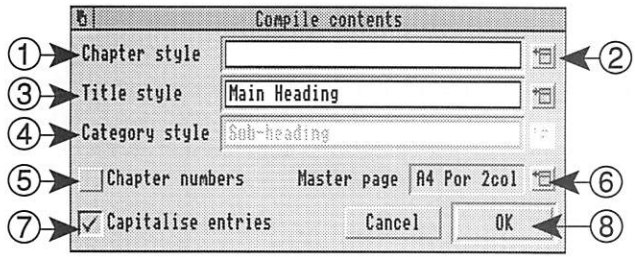
Use the menu option (*Utilities* ⇒ *Compile index*) to display the *Compile* dialogue box (described later). This creates a new chapter at the end of the document containing the index.

Each piece of text marked for inclusion in the index is given an entry in the index (the case of alphabetic characters is ignored). Entries can contain any character including spaces but any leading and trailing spaces are removed before they are entered in the index. A list of the page numbers containing each entry is constructed after the entry. If an entry appears on two or more consecutive pages a range is shown (*123-125*).

Entries are arranged alphabetically under category headings of the letters ***A*** to ***Z***. If an entry does not start with an alphabetic character it appears either before the ***A*** category or after the ***Z*** category, depending on the character.

The *Compile* dialogue box

Use either *Utilities ⇒ Compile contents* or *Utilities ⇒ Compile index* to display this dialogue box.



① Chapter Style

This is the style that will be applied to the whole chapter. It should be appropriate for the layout of the chapter. If the *Chapter* style is defined to have no tabs then the page list will be displayed directly after the entry text. If the *Chapter* style defines a tab position it should be set so that it is beyond the end of the longest entry text. Then all the page number lists will line up vertically. The left margin and return margins can be used to control the wrapping of long page number lists. It is also probably a good idea to set the *Space below paragraph* attribute of the *Chapter* style to **0** otherwise text may be spaced out too much.

② Style lists icon

You can type style names into *Chapter style*, *Title style* and *Category style*. An easier alternative is to:

- click on the *Style lists icon*, or
- click **Menu** on the editable field.

Either action displays a list of styles from which you can choose.

③ Title style

This is applied to the word ***Index*** or ***Contents*** that is always placed at the start of the chapter.

④ Category style

This is only used in index compilation.

It is applied to each of the category headings ***A*** to ***Z***. It is useful to set the *Space above paragraph* attribute to at least **4pt** so that each category is separated from the preceding entries.

⑤ Chapter numbers

If this is ***on***, page numbers are shown in the form
chapter.page.

This lets you number each section of a manual independently and show the complete section number in the index and contents pages. (See *2.3 text handling* for details of inserting page and chapter numbers into the text.)

If the button is ***off***, only the page number is shown.

⑥ Master page

This lets you choose a suitable master page to use for the index or contents chapter. As index entries are usually fairly short, a two column master page (as shown in the illustration) can make better use of the space on the page.

Click on the menu icon to display a menu of master pages.

⑦ Capitalise entries

If this is ***on***, entries have an upper-case first letter. Otherwise the entries are shown as they first occur in the document.

⑧ The *OK* button

Click on this to create the index or contents chapter. You can edit these like normal chapters. If you ever need to re-compile them, any edits that you have made do not appear in the new version. For this reason, creating a new index/contents chapter does not delete the old one. This gives you the opportunity to examine the changes between the old and new chapters. The old chapter can then be deleted using *Edit ⇒ Delete chapter.*

Common aspects of index & content compilation

Text stories that exist only on master pages, such as headers and footers, are not included in the index/contents search.

If the document is very large the index/contents compiler may have to bring in text stories which have been shuffled out of memory - so there may be some disc access while the new chapter is being compiled.

2.16 Customising Impression

This section covers:

- changing the master page
- *Preferences* in the Icon Bar Menu
- auto-loading files

Introduction

Every owner of Impression has a different use for it. One user might want it mostly for letters, another for producing newsletters, and another for writing books. No matter what your requirement for Impression, you will almost certainly find that one aspect or another is not exactly as you would like it.

For this reason, many features of Impression are changeable.

Changing the default document

(The default document is the blank document that appears when you click on the Impression icon on the icon bar.)

The *Utilities ⇒ Save as default* menu option lets you overwrite the default document with the current document.

To modify the default document:

1 Click on the Impression icon to open a new document.

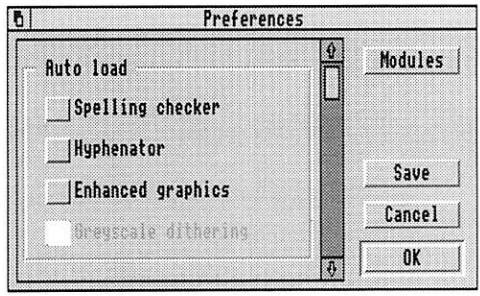
2 Make any necessary changes. (These changes could be adding, modifying or deleting styles from the style list; modifying the layout of frames on the default page; adding, modifying or deleting master pages. You can make any change to the default document that you can to an ordinary document.)

3 When you are happy with the changes, use *Utilities ⇒ Save as default* to make this the new default document.

4 Quit and then reload Impression. This loads the new default document.

Icon bar menu *Preferences*

This dialogue box controls the preferences while Impression is running, letting you change the defaults after Impression has started, but it also allows you to save the preferences in the Impression application so that these become the defaults.



Click *OK* to use, but not save, the new preferences.

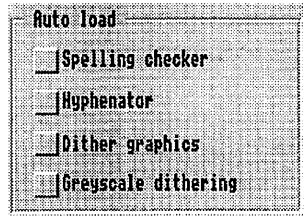
Click *Cancel* to ignore any changes made to the preferences.

Click *Save* to use the new preferences and also save them within Impression, so they also take effect each time Impression is loaded. You also save the current setting of the *Save text* options (these are on the *File* menu).

The *Modules* button is described later.

There are five areas controlled by the *Preferences* dialogue box.

Auto load

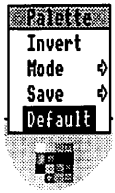


The spelling checker, automatic hyphenation, and dither graphics within Impression are controlled by separate program modules, which are stored within the Impression application directory. Normally, they are not automatically loaded, as they take up valuable memory - the spelling checker takes up over 100KB - but if they are always required, *Spelling checker*, *Hyphenator*, and *Dither graphics* can be switched ***on***. Then, if the preferences are saved, the next time Impression is loaded it automatically loads in the selected modules.

You need to load the dither graphics module (which is about 20KB long) if you want rotated sprites in RISC OS 2 and grey-scale dithering. Even with this option ***off***, you can always rotate Draw files. If you have RISC OS 3 you can always rotate Sprites. Only RISC OS 2 needs this option to rotate Sprites.

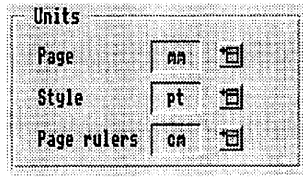
Greyscale dithering is greyed out until *Dither graphics* is turned on. Turning on *Greyscale dithering* does several things:

- Displays all the sprites using greyscale dithering, ensuring monochrome sprites appear as well as they can on screen. This applies to sprites containing colour as well, so all sprites appear as monochrome images.
- Sets the desktop colour palette to give 16 grey levels. If you use a colour monitor, it appears as though the screen is monochrome. Using 16 grey levels vastly increases the on-screen display of monochrome images.
- Loads in another module which extends the range of grey levels available in *Draw* images. This uses dithering to give the appearance of far more grey levels than are actually available.



To return the colours back to normal just use the palette utility on the right of the icon bar. (Click **Menu** on the palette icon and then select *Default*.)

Units



Several of the dialogue boxes in Impression display measurements. Use this area to change the display default units. Any page measurements, such as frame sizes or page sizes, use the *Page unit*. Style or typeface measurements, such as font size or line spacing, use the *Style unit*. Page rulers use *Page rulers*.

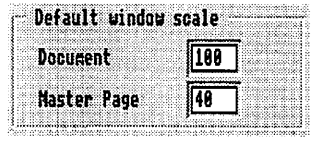
To change one of the default units, either;

- click on the arrow to the right of the box, or
- click **Menu** on the box itself.

This displays a menu of available units. The currently selected entry is ticked. Click on the required name to change the default units.

When using Impression, you can type in new values using any of the units that Impression recognises and Impression will do any required conversion. For example, if the page unit is inches, you can type in a value as ***3cm***. Impression then automatically converts that value from centimetres to inches. All values would be displayed in inches.

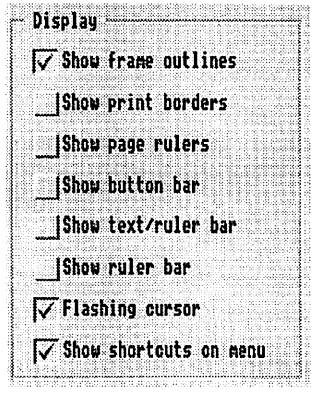
Default window scale



Whenever a new window is created onto a document, it has a default scale, normally 100%. It may be useful to change this, as the best scaling depends on the screen mode. As an example, 100% in mode 12 means that Impression cannot display the full width of the default frame - a scale of 90% would be more useful. To change the scaling of the document view, edit the number in the *Document* field. The scale is saved with the document and applies when you next load the document.

Master page performs the same task for the master page window.

Display



This box controls certain aspects of the way documents are displayed in Impression.

Show frame outlines

Turns frame outlines ***on*** or ***off***, except for the selected frame which always has an outline. Turning the frame outlines off

gives a better impression of how the page will look when printed.

This option has a keyboard short cut of *Ctrl-O*. You can also use the *Frame outline* tool on the toolbar.

Show print borders

This duplicates *View ⇒ Print borders* and has a keyboard short cut of *Ctrl-Shift-O*.

This shows the limit of the current printer driver's printable area in grey. This limit only applies when printing single pages at 100%. *2.4 Printing* describes using the print borders.

Show page rulers

This duplicates *View ⇒ Page rulers* and has a keyboard short cut of *Ctrl-P*.

This turns the rulers along the top and left-hand edges of the window on or off. Because the ruler has to be redrawn when the document moves in the window, showing the page rulers can slow down screen updating.

Show button bar

This displays the button bar along the top of the document. It duplicates *View ⇒ Tool bars ⇒ Show button bar*. (See *2.2 Toolbars* for details.)

Show text/ruler bar

This displays the text/ruler bar along the top of the document. It duplicates *View ⇒ Tool bars ⇒ Show text/ruler bar*.

Show ruler bar

This displays the ruler bar along the top of the document. It duplicates *View ⇒ Tool bars ⇒ Show ruler bar*.

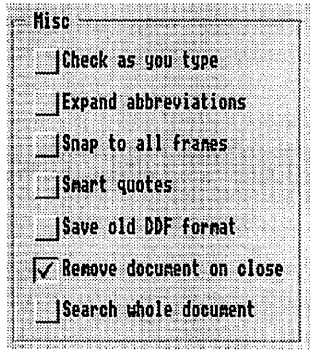
Flashing cursor

It is often easier to see the cursor if it is flashing. This is especially so on monochrome monitors.

Show short cuts on menu

Showing short cuts on menus can be a useful reminder but increases the width of menus.

Misc



Check as you type

This checks the spelling of words as you type them. You also need to set *Spell check* ***on*** in *Auto load* and include any user dictionaries in the Auto directory.

For more details of spell checking, refer to *2.13 Spell checking & Dictionaries.*

Expand abbreviations

If you have created an abbreviation directory, setting this option ***on*** will automatically expand abbreviations as you type them. You must create an abbreviation dictionary before you can use abbreviation expansion.

For more details of abbreviation expansion, refer to *2.13 Spell checking & Dictionaries.*

Snap to all frames

This facility is described in *2.8 Frame handling.*

Smart quotes

This option affects the interpretation of 'sexless' quotes in text files read into Impression. (Sexless quotes are the ' and " characters on the keyboard, next to the *Return* key.) Impression can convert these into proper open and close quotes (‘ ’ and “ ”). The smart part is that Impression decides when it should use open quotes and when close quotes, according to the rules of English punctuation. It occasionally confuses an apostrophe for a close quote but usually gets it right. Smart quotes can greatly improve the appearance of a document especially when printed at high resolution.

A second feature is that two consecutive ordinary dashes (--) are converted to a long or ***em*** dash (—).

You would turn this option ***off*** to import program listings as usually these require the sexless quotes and '--' to remain unchanged.

Save old DDF format

The version of DDF used in this Impression is incompatible with older versions. This option lets you save text in the old format. You can then load those text files into older versions of Impression. The on-line help contains more details on DDF commands

Remove document on close

As described in *2.1 The basics*, clicking on the Close icon can have two possible effects:

(a) Close the window and remove the document from memory. (This is the convention with most Acorn applications.) If you have multiple windows (up to four are allowed), the document is only removed when you close all the windows.

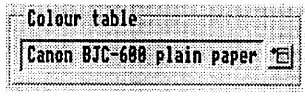
(b) Close the window but retain the document in memory. This can be useful if you want to have several documents in memory (up to 15) but don't want to clutter the screen with unwanted windows.

This option selects which option applies. (When selected, option *(a)* applies.) The most suitable option is a matter of personal preference.

Search whole document

This applies to the *Find & Replace* dialogue box. See *2.3 Text handling* for more details.

Colour table



Click on the menu icon for a menu of available tables. Colour tables are described in *2.4 Printing*.

To change the default colour table, select the required table and then click *Save*.

Modules

This button opens a dialogue box that lets you load and remove modules from the auto-load list and from memory. These modules can perform a variety of functions such as loading files in alien formats and permitting draft printing.

The loader modules can be found in the *Extensions* directory.

An Impression loader or printer module has this icon

To load a module

Select either *Auto loaded* or *In memory*. Modules in the auto directory are loaded every time you load Impression. Modules in memory are discarded when you *Quit* Impression.

Drop the module icon on the load target. This loads the module and adds it to the list in the dialogue box.

The types of module you can load are:

- Impression loader and printer modules,
- spelling checker user dictionaries,
- spelling checker ignore dictionaries, or
- RISC OS relocatable modules.

Other types of module are ignored if you try to load them.

To remove a module

1 click on the module name to highlight it,
2 click on *Delete*.

Chapter 3: Keyboard short cuts

The usual notation is used:

- *F1* to *F12* denotes the function keys,
- *Shift-F1* - hold down the *Shift* key and then press *F1*,
- *Ctrl-F1* - hold down the *Ctrl* key and press *F1*,
- *Ctrl-Shift-F1* - hold down both *Ctrl* and *Shift* and press *F1*.

Dialogue boxes

F3 - save
F4 - find
Ctrl-F1 - document info
Ctrl-F5 - new style
Ctrl-F6 - edit style
Ctrl-F7 - new chapter or new master page
Ctrl-F8 - dictionary
Ctrl-F9 - scale view
Ctrl-F10 - alter frame
Ctrl-F11 - alter graphics
Ctrl-T - tracking/kerning
Ctrl-Shift-A - alter chapter
Ctrl-T - tracking/kerning dialogue box
Print - print

Page movements

Ctrl-Shift-G - go to page
Ctrl-Shift-N - move to next page (if any)
Ctrl-Shift-P - move to previous page (if any)
Ctrl-Shift-W - go to chapter
PageUp - scroll down one screen
PageDown - scroll up one screen
Ctrl-Shift-↑↓←→ - equivalent to clicking on the Scroll Arrows

Effects & Styles

Ctrl-B - embolden text
Ctrl-I - italicise text
Ctrl-N - clear all styles (revert to *Normal* style)
Ctrl-Shift-J - superscript effect
Ctrl-Shift-K - subscript effect
Ctrl-Shift-L - line spacing edit box
Ctrl-Shift-S - text size edit box
Ctrl-Shift-T - increase font size
Ctrl-Shift-U - underline effect
Ctrl-Shift-Y - decrease font size
F5 - left align (justify) text
F6 - centre text
F7 - right align (justify) text
F8 - fully justify text

Kerning

Ctrl-E - extend space between characters (horizontal kerning) or expand tracking of region of text
Ctrl-J - move baseline down (vertical kerning)
Ctrl-R - reduce space between characters (horizontal kerning) or reduce tracking of region of text
Ctrl-T - tracking/kerning dialogue box
Ctrl-U - move baseline up (vertical kerning)

Deleting & Copying

Ctrl-C - copy the selected item to the clipboard
Ctrl-D - cut the word at the cursor to the clipboard
Ctrl-H - delete the character before the cursor
Ctrl-K - delete the selected item

Ctrl-X - cut the selected item to the clipboard
Ctrl-Copy - cut the entire line to the clipboard

Pasting & Inserting

Ctrl-V - paste clipboard contents
Insert - equivalent to *Ctrl-V*
Ctrl-Shift-D - insert current date
Ctrl-Shift-E - insert new repeating frame
Ctrl-Shift-F - embed frame
Ctrl-Shift-I - insert new blank frame
Ctrl-Shift-F9 - insert subsequent paragraph number
Ctrl-Shift-F10 - paragraph number selected region

Rulers

Ctrl-P - toggle page rulers on and off
Ctrl-Shift-R - toggle Toolbar on and off

Selecting text

Ctrl-A - select entire story containing cursor
Ctrl-L - select line containing cursor
Ctrl-Q - select word containing cursor
Ctrl-2 - select paragraph containing cursor
You can also select using the mouse:
double-click to select a word,
triple-click to select a line,
quad-click to select the entire paragraph.

Spelling

Ctrl-F - check spelling of the story from the cursor
Ctrl-W - check spelling of the word at the cursor

Miscellaneous

The remaining commands don't fit into any particular category.

Ctrl-G - force to next frame
Ctrl-O - turn frame outlines on and off
Ctrl-S - swop case of character at cursor (from lower-case to UPPER-CASE or vice versa)
Ctrl-Y - find next occurrence of search word
Ctrl-Z - deselect the selected region
Ctrl-F2 - remove document
Ctrl-F3 - save text story/graphic
Ctrl-Shift-C - close window (this is the same as clicking on the Close icon on the editing window)
Ctrl-Shift-H - insert a bullet point (•) at cursor
Ctrl-Shift-O - turn print borders display on or off
Ctrl-Shift-Q - transpose characters either side of cursor
Ctrl-Shift-F1 - open new window on current document
Ctrl-Shift-F2 - open master page window
Ctrl-Shift-F3 - Toggle single file/directory save formats
Ctrl-Shift-_ - insert an n-dash (–) at cursor
Shift-F1 - permit editing of irregular frames
Shift-F2 to F10 - scale view to 20% to 100% of full size
Shift-F11 - halve current viewing scale
Ctrl-Shift-F11 - double current viewing scale

Mouse operations

Anywhere in document:

Select	+Ctrl+Shift	Click	- double current scale
	+Ctrl+Shift	Drag	- Zoom rectangle
	+Shift	Drag	- Create frame selection rectangle
Menu			- display Main Menu
Adjust	+Ctrl+Shift	Click	- halve current scale

Blank areas of a page:

Select	Drag	- scroll your view of document

Frame handles, normal action:

Select	Drag	- resize frame

...additional action in graphics frames

Adjust	Drag	- resize frame and scale contents

On outline of irregular frames:

...on handles

Select	Drag	- move handle
Drag over another handle		- delete handle
+Shift	Click	- delete handle

... on frame edge

Select	Click	- add handle

Within frames:

...all types of frames

Select		Click	- select frame under pointer
	Click and Hold		- pick up and drag frame
Select	+Shift	Click	- add frame to or remove frame from current frame selection
Select	+Ctrl	Drag	- if over selected frame, pickup and drag selected frame, else drag frame under pointer

Select	+Alt	Click	- perform Click operation on frame below selected frame
Select	+Shift+Alt	Click	- as Shift Click but acts on frame below selected frame

...additional action in blank frames:

Adjust	Click	- link frame contents to selected frame contents

...additional action in repeating frames:

Select	Double-click	- move to first occurrence of frame

...additional actions in text frames:

Clicking or dragging within a selected region...

Select	Click & release	- clear selection and position cursor
	Drag	- move text using drag & drop
Select	+Shift Drag	- copy text using drag & drop

Otherwise...

Select	Click	- position cursor
	Drag	- select a region from click point to end of drag
	Double-click	- select word
	Triple-click	- select line
	Quad-click	- select paragraph
Adjust	Click	- select region from cursor/selected region to click point
	Drag	- select region from cursor/selected region to end of drag

...additional actions in graphics frames
(including frames with embedded data):

Select	Double-click	- alter graphic dialogue box
+Ctrl	Double-click	- OLE to parent application
Adjust	Double-click	- scale graphic to fit the frame

Graphics tool:

Rotate handle

Select		Drag	- rotate
		Double-click	- set angle to 0°
Select	+Ctrl	Drag	- constrain rotate to 45° angles
Adjust		Drag	- rotate frame and graphic; make frame irregular

Pan handle

Select		Drag	- move graphic in frame
		Double-click	- centralise graphic
Select	+Ctrl	Drag	- constrain pan to 45° angles

Scale handle

Select		Drag	- scale graphic about centre
		Double-click	- scale graphic to 100%
Select	+Ctrl	Drag	- preserve current aspect ratio
Adjust		Drag	- scale frame and graphic

Appendix 1: Updating ABI

The ABI module covers the user interface of Impression and other applications. This section describes the action you should take if you get the error message "... *Please refer to the "Updating ABI" section in the manual*".

This message means the application requires a more recent version of ABI than that on your disc. Read the manual for the application that you have updated – this section covers problems after Impression upgrades.

Depending on your level of expertise you can use the non-technical or the technical way to update ABI. If the message persists, seek technical assistance.

The non-technical way

1 Re-run the Impression *!Install* program. This re-installs ABI on your computer.
2 Quit any applications currently loaded.
3 Reset the computer.
4 Reload Impression.

The technical way

1 Open the *!Style* application directory.
2 Open the Impression *RMStore* directory.
3 Open the *!System.Modules* directory.
4 Copy the *ABIMod* file from *RMStore* into *!System.Modules*.
5 Quit any applications currently loaded.
6 Reset the computer.
7 Reload Impression.

Appendix 2: Using Dialogue Boxes

Dialogue boxes are the most important way in which you communicate with Impression. Nearly every important function, apart from entering text, is carried out through the use of a dialogue box. The dialogue boxes in Impression have all been designed to look and act in the same way so that they never do anything unexpected.

While we have tried to make our dialogue boxes look distinctive, they closely follow the Acorn style guidelines. If you have never used dialogue boxes before, the following descriptions should help you to understand how they work. If you are familiar with dialogue boxes you can probably skip the rest of this appendix, as Impression dialogue boxes will hold no great surprises for you.

Every box that you click on or type into in a dialogue sets up a new value or does something inside the program. You can tell roughly what is going to be done by the shape and colour of the box you are clicking or typing into. You can also tell what the current setting of a value is by the shape, colour and text of the boxes.

Switches

Switches are small squares with text immediately to the right or left of them. Switches only have two positions - clicking on the switch or the text beside it will flip the switch from on to off or vice versa.

- When a switch is on, it is drawn with a tick in the middle and looks as if it is pushed into the dialogue box. In this state it means that the value named by the text of the switch is ***on*** or ***set*** or ***true***.

- When a switch is off, it is simply a light grey square which looks as if it is raised up from the dialogue box. In this state the value is ***off*** or ***unset*** or ***false***.

Radio switches

Radio switches are small circles, once again with text immediately to the right or left of them. Radio switches are always shown in groups of two or more and only one switch in the group can ever be on. They are used to set one value from a small range of possible values. The radio switch which is ***on*** shows which of the values is selected

- When a radio switch is ***on*** it has a dark grey circle in the middle and looks as if it is pushed into the dialogue box.

- When a radio switch is ***off*** it is just a light grey circle which looks as if it is raised up from the dialogue box.

Action buttons

Action buttons do not set values. They are drawn as if they are raised up from the dialogue box and the text inside them describes what will happen when they are clicked.

• Most have a **Cancel** action button. When you click on this button any changes that you have made by clicking or typing in the dialogue box will be cancelled - all the values shown by the dialogue box will revert to what they were before the dialogue box appeared on screen.

The *Default action* button

The default action button can be clicked like any other action button. The difference between this and other action buttons is that it also responds to *Return*. When the dialogue box has the text cursor in one of its editable fields and the Return key is pressed, the dialogue box acts as if the default action button had been clicked.

There can only be one default action button in a dialogue box and it is drawn much like other action buttons but with a yellow 'moat' around it.

• Most dialogue boxes have a default action button and it is usually named **OK**. Clicking the **OK** button (or pressing *Return*) means that you want to use the changes that you have made in the dialogue box.

Editable fields

Editable fields are white rectangles with black borders which look as if they are indented into the dialogue box. A textual value is shown inside the white rectangle and this can usually be altered by typing in a new value. The text cursor must be in the editable field that you wish to alter before any changes can be made.

The text cursor can be put into an editable field in one of two ways. The simplest method is to click on it. Any subsequent typing will appear in the editable field where the text cursor is and the text cursor will move along with them.

It is usually necessary to delete the old value before typing in the new one and this can be done by pressing the → key to

move to the right-hand end of the text and then pressing the *Delete* or *Backspace* keys a few times until the text has been cleared. An easier way to delete the text from an editable field is to press *Ctrl-U*. (*Ctrl-U* means hold down the *Ctrl* key and press *U* or *u*.)

The other way of getting the text cursor into an editable field is to use the keyboard. There are some keys on the keyboard which will move the text cursor around between the editable fields in a dialogue box. They are:

↓	Move on to next field
↑	Move back to previous field
Tab	Move on to next field
Shift-Tab	Move back to previous field
Ctrl ↓	Move to first field
Ctrl ↑	Move to last field

The 'next' field is usually below or to the right of the current field.

The 'previous' field is usually above or to the left of the current field.

The 'first' field is usually the one nearest the top of the dialogue box.

The 'last' field is usually the one nearest the bottom of the dialogue box.

If the text cursor is in the last field and you try to go to the next one, it will go to the first field. Similarly, if the text cursor is in the first field and you try to move to the previous one, the text cursor will be placed in the last one.

Note that these keys only work if the text cursor is already in an editable field in the dialogue box.

- *Pressing* ***Return*** *when the text cursor is in an editable field does not move it on to the next one as it does in older design Acorn dialogue boxes. Instead, it always selects the default action button.*

Bump icons

These can point either up & down or left & right. Clicking on the arrows increases or decreases the value in the adjacent editable box. Usually each click changes the value by 1.

Page units and Style units

These are also called **Measurement units**. Editable fields which display measurements will display them in default units. Measurements relating to the position on that page are usually given in millimetres, and those relating to styles, such as font size, are given in points. These default units can be changed using the *Preferences* dialogue box but, regardless of the units displayed, numbers can be entered in any unit recognised by Impression. If you type the number followed by the abbreviation for the unit, Impression will convert into its internal units. The units recognised by Impression are:

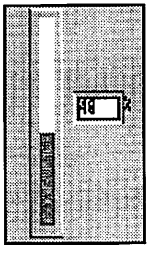
in	**inches**
ft	**feet**
yd	**yards**
pt	**points ($^1/_{72}$ inch)**
pi	**pica ($^1/_6$ inch)**
mm	**millimetres**
cm	**centimetres**
m	**metres**

Colour fields

Colour fields let you enter colour values and look a lot like editable fields - they are inset into the dialogue box and have black text on a white background but they also have a coloured spot to the right of the text. The colour of the spot is the closest screen colour to the actual colour defined and the shape of the spot describes which colour model was used to define it. For more information on colours see *2.12 Colour handling.*

- To alter the colour shown by a colour field just click in it and the *Colour Picker* dialogue box will appear.

Sliders



Sliders are used as a quick way to enter numbers and they also show the number graphically. Sliders are drawn as a thin coloured bar on a white background which is raised up from the dialogue box. At either end of a slider there is some text which tells you the range of numbers which the slider represents. Quite often there will also be an editable field close to the slider which gives the actual number the slider is showing graphically.

- To alter the value of a slider click on it and keep the mouse button pressed. Then move the mouse pointer along the slider and the coloured bar will follow the pointer. When you let go of the mouse button the slider will set the value according to the last position of the mouse pointer.

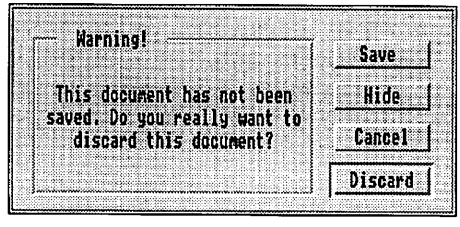
Load targets

Load targets are visual reminders that something can be loaded into Impression by dropping a file icon into a dialogue box. They are drawn as large downward pointing arrows above the name of the type of object which can be loaded.

• To use a load target you should drag the file icon of the file you want to load from one of the directory windows onto the load target. If you click on a load target a small dialogue box will appear to remind you how to use that load target.

Alert boxes

Alert boxes are a special type of dialogue box. They are used to tell you something important or to ask a question which must be answered before the program can continue.

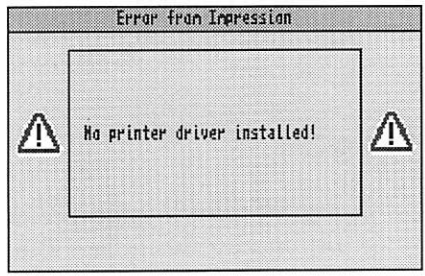


An Alert box is a small window with no title bar or close box and appears in the centre of the screen. It has some text in a box on the left and up to three action buttons on the right. The text explains what the problem is and what you can do to deal with it. The buttons allow you to choose one option to deal with the problem.

When an Alert box is on the screen you will not be able to move the mouse pointer beyond the box and you will not be able to type characters into any other window or dialogue box on the screen. This ensures that you respond to the Alert immediately.

Report boxes

Report boxes are similar to Alert boxes but they usually report much more serious problems. Report boxes look different because they are not drawn by Impression but by RISC OS. They are large windows with text in the centre, two exclamation marks on either side and buttons at the bottom.



• Report boxes often appear when there has been an error inside Impression. **It is strongly recommended that whenever you see a report box you save your documents immediately afterwards!**

Appendix 3: Recommended equipment

Your choice of equipment and its specification will necessarily be limited by your budget. It is possible to run Impression on a basic computer, though your machine must have at least 2MB of memory fitted.

The question of what to get in order to enhance your system is never an easy one to answer. However, here we offer a few pointers. Please note that we cannot recommend particular makes or models of monitors, printers or scanners.

Memory

Impression can operate in a 2MB computer but the more RAM the better. Computer Concepts' recommends a minimum of 4MB.

Disc drives

You can use Impression on a floppy disc based machine. However we strongly recommend a hard disc. These give much greater storage capacity and faster loading and saving. This is important if you use a lot of different fonts – with floppy discs you will have to swop discs frequently.

Monitors

We recommend a multisync monitor. These can display greater detail than other monitor types. You will also find multisync monitors less tiring to use for long periods.

For serious work and the best quality display, we recommend a graphics accelerator card such as the Computer Concepts ColourCard. These allow much higher resolution displays with less flicker and are ideal complements for multi-scanning monitors.

Printers

There is a wide choice of printers available to work with Acorn computers ranging from cheap dot-matrix printers to top-quality laser printers and colour printers. Computer Concepts offer several types of quality printer and also a range of printer drivers for many popular printers.

We do not recommend dot-matrix printers. They are slow and give inferior results compared to other types of printer such as ink-jet.

Scanners

If you wish to include illustrations and photographs in your documents, an image scanner could be the answer. Scanners are fast becoming popular accessories and Computer Concepts currently has a range of models available.

Appendix 4: Hints & Tips

This chapter contains general hints concerning many aspects of Impression. It is provided because although most things are quite possible in Impression, it is not always obvious how they might be done. You should also refer to the document called *!Hints* on the Publisher discs which contains the latest information.

A menu option is greyed

This usually happens when a menu option is not appropriate to the current situation. For example, if the currently selected frame is not a graphic frame, then menu options relating to graphics are greyed.

If the document beneath the menu does not have the currently selected frame in it (shown by a yellow title bar), then most of the options will be greyed. Simply clicking in the document then ungreys the menu options.

Memory problems

If you get *'out of memory'* or *'heap full'* errors, it is likely that the memory is not ideally configured. The memory available to Impression is reduced if the *Module area* or *System Sprite area* is allocated unnecessarily large amounts of memory.

The higher the screen resolution, the more memory is required. Therefore, a simple way to recover more memory is to switch to a lower resolution screen mode. Mode 12 requires 80KB whilst mode 11 requires half that. Mode 0 is not really suitable for editing text in Impression but can be used and requires only 24KB. (Mode 0 can be useful when maximising memory for printing.)

Acorn recommend that no memory is allocated to the *System Sprite area* and the minimum possible to the *Module area* (*RMA*). Refer to the Installation supplement for details of how to change the settings. Remember to reset the computer after making any changes.

Many applications (such as *!Draw* and *!Paint*) load parts of their programs into the module area. When these programs are removed from memory, a residual area is still occupied in the module area. This reduces the space available to Impression.

You cannot recover these residual areas except by pressing *Reset*. To give Impression the maximum possible memory, press *Reset* before starting Impression. This removes any unnecessary programs from the module area.

Cursor going outside the frame

To allow text to go right up to the right edge of a frame, the last space (or two) on a line of text can be positioned outside the frame. As spaces don't show when printing, this has no effect on the printed result. However to show that the spaces are there (like all characters they must be editable) it is possible to position the cursor just outside the frame. This is a deliberate design feature and so you should not be concerned when the cursor moves outside the frame in this manner.

My screen isn't wide enough!

When using a conventional monitor in, for example, mode 12, a typical A4 Impression document is slightly wider than the

maximum width of a window. This means that it is not possible to see a full line-width of text within a window without scrolling it. There are several solutions to this.

- Scale the view size down to 80% or 90%. This can be done very easily with the key short cut *Shift-F8* or *Shift-F9* but has the disadvantage that the text gets smaller and so less easy to read.
- Use a multisync monitor. This is the best solution as it can dramatically improve the appearance of the outline text while at the same time allowing very much larger amounts of the document to be seen on screen. It also has the benefit that higher refresh rate screen modes (less flicker and less eye-strain) can be used.

16 grey palette

Within the Impression application directory there is a 16 grey level palette. If this is loaded (by double-clicking on it), it changes the 16 colour modes to show 16 shades of grey. This gives scanned images and grey half-tone artwork a more realistic appearance.

Sprite files

RISC OS cannot display sprites created in a new screen mode (that is, a non-Acorn mode) unless the screen extension module has already been loaded.

The one exception is using *!Paint* to 'grab' a part of the screen area. If this is done while in any new mode, then the sprite is created with the screen mode number in it. If this sprite is subsequently put into an Impression document and then that document is used on a machine that does not know about that screen mode, the sprite is not correctly displayed.

The same display problem exists in the *!Paint* and *!Draw* programs, neither of which can display such sprites correctly.

How do I alter my start page ?

Suppose, for example, that you want Impression to always start up with a standard A4 page, but with a footer line that shows the page number at the bottom of each page.

Altering the start page is described in *2.16 Customising Impression.* However the actions needed to achieve the required result are as follows:

1 Click on the Impression icon on the icon bar. This opens the standard window showing a blank page.

2 Choose *View master pages* in the *View* menu to open the view onto the master page. The window shows the current master page. Click in the centre of this page to select the frame. You will probably want to scale the view to 100% by pressing *Shift-F10.*

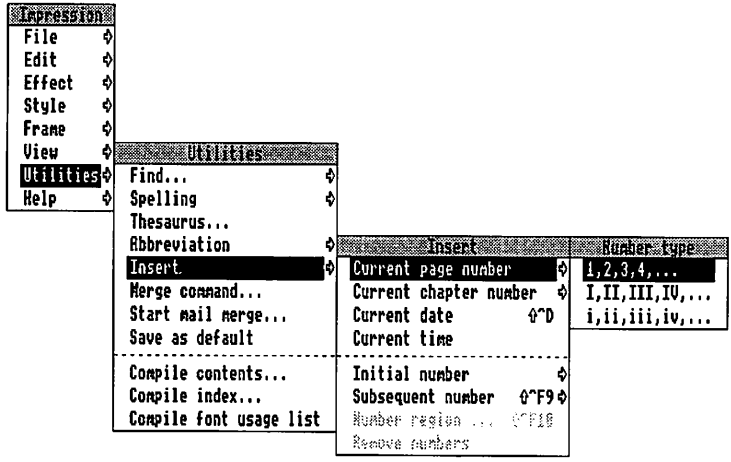
3 Move the bottom edge of the selected frame up a bit to make room for the footer line - probably no more than 0.7 cm. The next requirement is to create a new frame along the bottom of the page. Use *New frame* in the *Frame* menu to do this, making it deep enough to contain one line of text - no more than 1 cm.

4 Now enter the text to be used for the footer in this newly created frame. For example, if it is to be centered in italic the sequence would be something like:

a) Click in the footer frame to select it.

b) Press *Ctrl-I* followed by *F6* and type 'Page' followed by a space.

c) Choose *Insert* ⇒ *Current page number*



After having done this, the footing line should appear in italics, centered with the ***<pn>*** symbol at the end. This ***<pn>*** indicates where the page number will go.

5 Close the master page window by clicking on its Close icon in the top left corner of the window. Now click in the original document window - the frames should re-arrange themselves so that the page number ***1*** appears at the bottom of the page.

6 Save the document back as the new default document. Use *Save as default* in the *Utilities* menu.

That's it. In future whenever you start Impression it will now use this document as its starting point. Of course you can use this technique to customise any aspect of the start-up document.

Loading text files

If a text file is dropped over the selected frame with the cursor in it, the text will be loaded and inserted into the document at the cursor position. The loaded text therefore takes on the

effects and styles that are ***on*** at the cursor. This can be a very useful feature as it allows text to be imported into a pre-set style. For example, if the text is required in italics then simply selecting the italic effect (press *Ctrl-I*) then dropping the text file over the frame will load this text in italics.

How do I delete a blank page

Edit ⇒ *Delete page* deletes the page that has the selected frame on it. As a completely blank page has no frame to select, this menu option cannot be used. To delete the blank page, first create a new blank frame on it. You can then delete the page.

The round 'a'

Sometimes a round 'ɑ' is required (especially in education where children are taught to write the letter 'a' in this manner). The *AvantG* font has such an 'a' and is available from Computer Concepts. There are four fonts in the family:

Book	ABCDE	abcde	12345
Book oblique	*ABCDE*	*abcde*	*12345*
Demi	**ABCDE**	**abcde**	**12345**
Demi oblique	***ABCDE***	***abcde***	***12345***

These fonts have a rather strange capital 'Ɑ', as you can see.

RISC OS hints and tips

Select/Adjust clicking

Clicking the right (**Adjust**) mouse button generally has a different action to clicking the left (**Select**) mouse button. This gives rise to the following effects:

Windows

A **Select** drag on a title bar moves the window as well as moving it to the top of the stacking order of windows while an **Adjust** drag moves the window but keeps its position in the stacking order.

Similarly an **Adjust** drag on the resize icon on a window retains the order of the window in the stacking arrangement.

Scroll bar

A **Select** click on a scroll bar arrow scrolls in the direction of the arrow while an **Adjust** click scrolls in the opposite direction. This allows scrolling in both directions from one end of the scroll bar.

A **Select** click in the blank area of the scroll bar causes a '*Page down*' operation while an **Adjust** click causes the opposite '*Page up*'.

Menu options

A **Select** click on menu options chooses that menu option and removes the menu while **Adjust** will keep the menu up if it is appropriate. Useful when applying effects.

Impression

A **Select** click on Action buttons in Impression causes the action to be carried out and the dialogue to be removed from screen while an **Adjust** click causes the dialogue to remain up. The best example of this is the Style Editor. This means that

changes can be made and seen on screen whilst still keeping the editor up to make any new adjustments.

A **Select** drag on graphics frame handles performs a clipping operation while an **Adjust** drag performs a resize operation.

Directory window

A **Select** click on the Close icon of a directory window closes the window while an **Adjust** click also opens the parent directory if one is present.

A **Select** click on a directory in a directory window opens the new directory viewer while an **Adjust** click also closes the parent window. This is useful in trying to avoid a Desktop cluttered with many directory viewers.

Double-clicking on an application in a filer window with the **Select** button runs the application while use of the **Adjust** button also removes the directory window from the screen.

Looking inside an application directory

Pressing the *Shift* key whilst double-clicking on a RISC OS application, such as the Impression *!Publisher* icon, opens a directory viewer of what is in the application.

Clearing an editable field

Pressing *Ctrl-U* when in an editable field wipes the entire field. This is useful when entering a new filename or document name to be saved out.

RISC OS applications

Any applications which are seen by RISC OS for the first time have their *!Boot* file run. Normally this sets up variables associated with the application such as file types and run actions for when the application's files are clicked on but also it loads any associated icons. In the worst case, if all RISC OS applications are situated in one directory, then on first viewing of this, there is a long pause whilst this setting up takes place but a large amount of memory can be taken up for the sprite

definitions. The worst possible case is a hard disc with all of the applications in the root directory. This means that memory is permanently lost instead of only being lost when the directory is viewed. The suggested approach is to split any applications logically into a number of sub-directories or over a number of discs on a floppy disc machine.

Printing

Most RISC OS printer drivers make use of the system sprite space for a work area. When printing is initiated, the driver grabs as much free memory as it needs, usually all on a 1MByte machine, and allocates it to the system sprite area. It uses this area to build up the image to be printed in strips. Once printing is complete it then releases this memory back to the free area.

One effect of this grabbing of free memory does mean that even if the fontmax configuration has been set correctly, then on machines which do not have enough memory for a full image as well as some extra, no memory is available to increase this cache. As printing uses the fonts at the resolution of the printer, which is normally much greater than screen resolution, a larger font cache is needed. Therefore, it is suggested that once the printer driver has been loaded and before printing, the memory is optimised by:

- When using the normal printing mode, as opposed to the character printing mode, the printer driver icon on the icon bar is no longer needed and thus can be removed by choosing the *Quit* option when the Menu button is pressed on the icon. This leaves the printer driver module in memory which is all that is needed.
- Changing to a lower resolution screen mode, e.g the four or even two colour modes. The mode which gives most memory is mode 0. For mode 20 use mode 19 or 18, whereas for mode 12 use mode 11. As the screen resolution plays no part in printing this means that more memory can be allocated to such items as the font cache or strip size (via the free memory).

- Once optimised, use the task manager to drag the font cache to a more reasonable size for printing. A rule of thumb might be to use double the allocation that you normally use for normal screen resolution cacheing. Allow a reasonable amount of memory free for the strip size but the font cache is more important. Another rule of thumb might be to allocate the memory on a two thirds to the font cache, one third to the strip size basis. An example of a suggested allocation might be:

  With 200KB of memory available to divide between the font cache/strip size then it is suggested that about 150KB is used for a font cache and the remainder left for the strip size.

Note that if you are using Computer Concepts' LaserDirect printer or TurboDriver software, you do not need to alter the font cache size. The printer's software automatically makes any required adjustments.

The System folder

In-memory transfer is achieved via a file, *Scrapfile*, which normally resides in the *!System* directory. A system variable, *Wimp$Scrap*, controls where this file resides. Users of single floppy machines may find it useful to either have the *!System* on their work disc or set up the system variable to point to their work disc to try and cut down on disc swopping.

Appendix 5: Font samples & Character Sets

Font samples

These are samples of the text fonts supplied with the Impression package. The Character font is not shown (see *2.3 Text handling* for further information on this font).

Additional fonts are available from Computer Concepts and other companies in particular Electronic Font Foundry (EFF).

Corpus:

bold	**ABCDEF**	**abcdef**	**123456**
bold oblique	***ABCDEF***	***abcdef***	***123456***
medium	ABCDEF	abcdef	123456
medium oblique	*ABCDEF*	*abcdef*	*123456*

Homerton:

bold	**ABCDEF**	**abcdef**	**123456**
bold oblique	***ABCDEF***	***abcdef***	***123456***
medium	ABCDEF	abcdef	123456
medium oblique	*ABCDEF*	*abcdef*	*123456*

Pembroke:

bold	**ABCDEF**	**abcdef**	**123456**
bold italic	***ABCDEF***	***abcdef***	***123456***
medium	ABCDEF	abcdef	123456
medium italic	*ABCDEF*	*abcdef*	*123456*

Trinity:

bold	**ABCDEF**	**abcdef**	**123456**
bold italic	***ABCDEF***	***abcdef***	***123456***
medium	ABCDEF	abcdef	123456
medium italic	*ABCDEF*	*abcdef*	*123456*

The character set

All of the characters displayed here are accessible from the keyboard. Those with codes greater than 127 can be typed by holding down one of the *Alt* keys and typing the character code on the keypad.

Codes 127-142 are undefined in RISC OS. Code 160 is a non-breakable space which is useful when you have two words which you want to keep together. Impression will not split at a non-breakable space.

32	60 <	88 X	116 t	144 ‘	172 ¬	200 È	228 ä
33 !	61 =	89 Y	117 u	145 ’	173 -	201 É	229 å
34 “	62 >	90 Z	118 v	146 ‹	174 ®	202 Ê	230 æ
35 #	63 ?	91 [	119 w	147 ›	175 ¯	203 Ë	231 ç
36 $	64 @	92 \	120 x	148 “	176 °	204 Ì	232 è
37 %	65 A	93]	121 y	149 ”	177 ±	205 Í	233 é
38 &	66 B	94 ^	122 z	150 „	178 ²	206 Î	234 ê
39 ‘	67 C	95 _	123 {	151 –	179 ³	207 Ï	235 ë
40 (	68 D	96 `	124 |	152 —	180 ´	208 Ð	236 ì
41)	69 E	97 a	125 }	153 –	181 µ	209 Ñ	237 í
42 *	70 F	98 b	126 ~	154 Œ	182 ¶	210 Ò	238 î
43 +	71 G	99 c	127	155 œ	183 ·	211 Ó	239 ï
44 ,	72 H	100 d	128	156 †	184 ¸	212 Ô	240 ð
45 -	73 I	101 e	129	157 ‡	185 ¹	213 Õ	241 ñ
46 .	74 J	102 f	130	158 fi	186 °	214 Ö	242 ò
47 /	75 K	103 g	131	159 fl	187 »	215 ×	243 ó
48 0	76 L	104 h	132	160	188 ¼	216 Ø	244 ô
49 1	77 M	105 i	133	161 ¡	189 ½	217 Ù	245 õ
50 2	78 N	106 j	134	162 ¢	190 ¾	218 Ú	246 ö
51 3	79 O	107 k	135	163 £	191 ¿	219 Û	247 ÷
52 4	80 P	108 l	136	164 ¤	192 À	220 Ü	248 ø
53 5	81 Q	109 m	137	165 ¥	193 Á	221 Ý	249 ù
54 6	82 R	110 n	138	166 ¦	194 Â	222 Þ	250 ú
55 7	83 S	111 o	139	167 §	195 Ã	223 ß	251 û
56 8	84 T	112 p	140	168 ¨	196 Ä	224 à	252 ü
57 9	85 U	113 q	141	169 ©	197 Å	225 á	253 ý
58 :	86 V	114 r	142	170 ª	198 Æ	226 â	254 þ
59 ;	87 W	115 s	143 •	171 «	199 Ç	227 ã	255 ÿ

The *Dingbats* font

To select a characters, select the Dingbats font, hold down *Alt* and type its decimal number on the keypad.

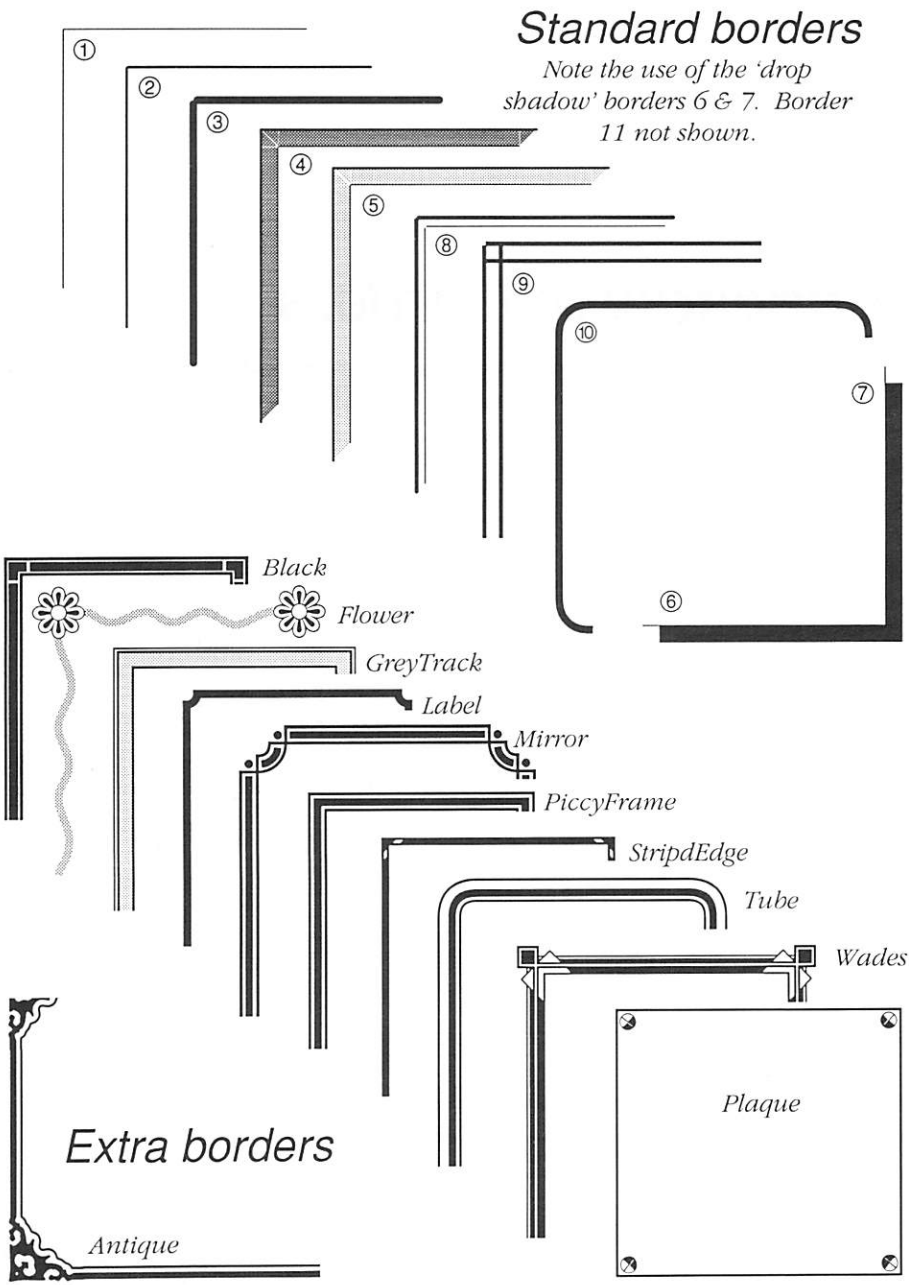
32		60	✍	88	✸	116	▼	144	❯	172	①	200	⑨	228	➤
33	✁	61	✝	89	✹	117	◆	145	❯	173	②	201	⑩	229	➥
34	✂	62	✞	90	✺	118	❖	146	❯	174	③	202	❶	230	➦
35	✃	63	✟	91	✻	119	◗	147	❯	175	④	203	❷	231	➧
36	✄	64	✠	92	✼	120	❙	148	❯	176	⑤	204	❸	232	➨
37	☎	65	✡	93	✽	121	❙	149	❯	177	⑥	205	❹	233	➩
38	✆	66	✢	94	✾	122	❚	150	❶	178	⑦	206	❺	234	➪
39	❯	67	✣	95	✿	123	❛	151	❷	179	⑤	207	❻	235	➫
40	✈	68	✤	96	❀	124	❜	152	❸	180	⑨	208	❼	236	➬
41	✉	69	✥	97	❁	125	❝	153	❹	181	⑩	209	❽	237	➭
42	☛	70	✦	98	❂	126	❞	154	❺	182	❶	210	❾	238	➮
43	☞	71	✧	99	❃	127		155	❻	183	❷	211	❿	239	➯
44	✌	72	★	100	❄	128	❮	156	❼	184	❸	212	➔	240	➰
45	✍	73	☆	101	❅	129	❮	157	❽	185	❹	213	→	241	➱
46	✎	74	✪	102	❆	130	❮	158	❾	186	❺	214	↔	242	➲
47	✏	75	✫	103	❇	131	❮	159	❿	187	❻	215	↕	243	➳
48	✐	76	✬	104	❈	132	❮	160		188	❼	216	↘	244	➴
49	✑	77	✭	105	❉	133	❮	161	❡	189	❽	217	→	245	➵
50	✒	78	✮	106	❊	134	❶	162	❢	190	❾	218	↗	246	➶
51	✓	79	✯	107	❋	135	❷	163	❣	191	❿	219	→	247	➷
52	✔	80	✰	108	●	136	❸	164	❤	192	①	220	➔	248	➸
53	×	81	✱	109	○	137	❹	165	❥	193	②	221	→	249	➹
54	✖	82	✲	110	■	138	❺	166	❦	194	③	222	→	250	➺
55	✗	83	✳	111	❑	139	❻	167	❧	195	④	223	➞	251	➻
56	✘	84	✴	112	❒	140	❼	168	♣	196	⑤	224	➟	252	➼
57	✙	85	✵	113	❑	141	❽	169	♦	197	⑥	225	➠	253	➽
58	✚	86	✶	114	❒	142	❾	170	♥	198	⑦	226	➢	254	➾
59	✛	87	✷	115	▲	143	❿	171	♠	199	⑧	227	➢	255	

The *Greek* font

Supplied with Impression is a specially designed Greek character set containing the whole Greek alphabet.

64 ≅	72 H	80 Π	88 Ξ	96	104 η	112 π	120 ξ
65 A	73 I	81 Θ	89 Ψ	97 α	105 ι	113 θ	121 ψ
66 B	74 ϑ	82 P	90 Z	98 β	106 φ	114 ρ	122 ζ
67 X	75 K	83 Σ	91 [	99 χ	107 κ	115 σ	123 {
68 Δ	76 Λ	84 T	92 ∴	100 δ	108 λ	116 τ	124 |
69 E	77 M	85 Y	93]	101 ε	109 μ	117 υ	125 }
70 Φ	78 N	86 ς	94 ⊥	102 ϕ	110 ν	118 ϖ	126
71 Γ	79 O	87 Ω	95 _	103 γ	111 ο	119 ω	127

Appendix 6: Borders


Standard borders
Note the use of the 'drop shadow' borders 6 & 7. Border 11 not shown.
①
②
③
④
⑤
⑧
⑨
⑩
⑦
⑥
Black
Flower
GreyTrack
Label
Mirror
PiccyFrame
StripdEdge
Tube
Wades
Plaque
Extra borders
Antique

Appendix 7: Printers & Draft printing

General notes

There is a vast range of printers that can work with Acorn computers. In many cases you get satisfactory results even if the printer drivers are not set up exactly. Because Impression prints an exact copy of what is on the screen, printer set-up can be more important. This appendix details some of the common problems encountered and their solution.

Also included are details of ***Draft mode printing***. This lets you use the in-built character set of the printer to speed up the printing of text.

Setting-up your printer driver (RISC OS 2 only)

Each of the printer drivers supplied with Impression is set up for a default printer type. This may not give the best results for your own printer. Refer to the *User Guide* supplied with your computer for details of setting up your printer.

Page size

Some users are confused about the page size when printing.

The page size in Impression is set quite independently of the

paper size used in the printer. The printer driver should be set up to have the correct size of paper to match the paper which is being used in the printer. Usually this is the same as the page size defined in Impression but in some cases they may be different. The best example is an A5 document in Impression and printing this out on A4 paper as two A5 pages side by side.

By default Impression starts with an A4 page. Many printers can use this paper size.

Traditional fan-fold paper is 11 inches long, which is shorter than A4. To use this size paper check that:

1 The dip-switches in the printer are set for 11 inch paper, with no perforation skip.
2 The printer driver is set to the correct page size. Refer to the *User guide* supplied with the computer for more details.
3 Impression is set to use 11 inch paper. To do this you will need to create a new master page of the correct dimensions. Use the *Alter Chapter* dialogue box to change to this new master page.

Few printers can print right up to the paper edge, and so it is sometimes useful to see the extent of the available print area. *View ⇒ Print borders* displays this non-printable area. When selected, Impression draws a light grey border around the edge of the page on screen. If any objects on the page extend into this grey area, they are unlikely to be printed.

Note the print borders can only be shown if the printer driver has been loaded. The print borders are shown on screen for pages printed upright at 100%. Therefore they do not indicate anything useful if printing sideways or at a different scale.

Laser printers

Part of the laser printing process briefly exposes the paper to a high temperature. This causes the paper to wrinkle slightly. Because of this, many manufacturers of laser printers say you should not print on both sides of the paper as this requires a second pass through the printer. (Technically, this is called

double-sided printing.)

We have used laser printers for double-sided printing, generally without problems. However, the paper does tends to jam or misfeed occasionally. Our advice is that double-sided printing is possible but you should expect some problems.

Dot Matrix printers

Using 24-pin printers (RISC OS 2)

You may find a problem if you have an Epson-compatible 24-Pin printer. The default setting of the printer driver is to treat the printer as 9-pin FX-compatible. When a 24-pin printer is driven in this mode, the resultant document can produce pages that are over-length.

The solution is to set the printer driver to Epson LQ compatible. See *Setting-up your printer driver* for details of changing the printer type.

Unexpected page throws

You may sometimes get page throws at the end of certain pages when printing your document. Refer to *Page size* (earlier in this appendix).

Hewlett Packard Deskjet printers

Please note that on the DeskJet the *landscape* printing option for text printing cannot be used as no character mode landscape fonts are available. These are available on the DeskJet Plus and most LaserJet compatibles. This landscape option only applies if text files are dropped onto the printer driver.

Also, the DeskJet cannot print multiple copies of the same page. This is because the printer driver assumes that a copy of the page is kept in the printer's internal memory. This is not the case with the DeskJet. If you want to print several copies,

set *Collated* in the *Print Setup* dialogue box; this prints a document as pages *1,2,3..,1,2,3...*

PostScript printers

It can take some time to print graphics and where a quick print-out is required (for example, when checking a document), you may find it useful to choose *No illustrations*. (This is in the *Print Set-up* dialogue box.)

If you have RISC OS 2:

Text printing uses fonts either built-in or loaded into the printer. If you use a font that does match one available in the printer, it is printed in Corpus (called *Courier* by PostScript).

```
This is Corpus font
```

A further problem is that many Acorn font names differ from the PostScript equivalents. The printer driver contains a file (called *PSprolog*) which "maps" Acorn font names to their PostScript equivalents. Again, any unmapped forts are printed in Corpus. You can edit *PSprolog* to add new fonts. However, we recommend you update to RISC OS 3 which has improved PostScript font handling.

Draft mode printing

Some printers, such as dot matrix, can take several minutes to print a page using the standard Acorn printer drivers. Draft mode printing uses the character sets built into the printer. You are limited to the fonts supplied with the printer and you cannot print graphics. However, draft mode is a quick way of printing simple documents.

Note that these modules are different to the standard RISC OS printer drivers.

To load these printer modules double-click on their icon in a directory window before displaying the *Print* dialogue box. Alternatively, you can copy the module suitable for your

printer into Impression's *Auto* directory. This is described in *2.16 Customising Impression.*

You may have to load the standard RISC OS printer driver for your printer to set up parameters such as serial or parallel connection, baud rate and so on. Once these parameters have been set, you can remove the printer driver from the icon bar.

To use draft printing set *Draft* in the *Print* dialogue box (see *2.4 Printing* for more details). Click on the arrow on the right of *Draft* to display the available printer modules. The top option (*NLQ*) is ticked when the near-letter-quality option is on. If your printer does not have NLQ, ensure this option is ***off***. (If the name is ticked, click on it to clear the tick and switch NLQ ***off***.)

Click on the name of the module you require and its name appears in the Draft box. Set up any other parameters needed (like the number of copies). If you now click *Print* on the dialogue box, the document is sent to the printer in a suitable format.

Font matching

When the fonts used match those in the printer, the printed result should be a close match for what appears on the screen:

```
The printed text fits if you choose the right font.
```

If the font size is slightly too small, text either truncates at the end of the line like this:

```
    The printed text fits if you choose the right fo
```

or runs onto the next line,

```
    The printed text fits if you choose the right fo
    nt.
```

If this happens, increase the font size slightly. It is more likely with left-justified text because Impression does not change the word spacing. With other forms of alignment, the space between words is adjusted for best match.

Unknown fonts

Text in any unrecognised font is sent to the printer in

basic monospaced font for all printer drivers which only have a monospaced font (such as *PrintLX*)

or proportional font for those printers with a proportional font (such as PrintLQ).

This means that any text that uses Greek or a symbols font is converted into conventional characters.

Stopping printing

Although the print information box is displayed whilst draft mode printing, the buttons on it have no effect. If you want to stop the printer before all the pages have been printed, press the *Esc* key on the keyboard. This stops the printer module at the end of the current line, but does not flush the printer's buffer. Depending on the size of the buffer, the printer may continue printing for several pages after you press *Esc*.

Modules supplied with Impression

Draft printing is only suitable for certain printers. If your printer type is not listed here, then draft printing offers you no advantages. For Hewlett Packard DeskJet and LaserJet printers and Canon BJ printers we recommend TurboDriver software for increased speed of page processing.

For **Epson RX, FX, LX** and compatible 9 pin dot matrix printers use *PrintLX*.
Not all printers exactly emulate the Epson LX and you may find that some text styles (such as subscript and superscript) do not print properly in NLQ mode. We have tested only a few of the vast range of printers that follow the Epson protocol and so cannot give details of all Epson-compatible printers.

For **Kaga Taxan KP810** & **Canon PW1080A** use *PrintKAGA*

For **Star LC10** use *PrintLC10*

For **Epson LQ** and compatible 24 pin printers use *PrintLQ*

For **Panasonic KXP1124** & **Citizen Swift 24** use *PrintKX*. The printer must be placed onto its programmable font and pitch settings from the control panel on the printer. See the manual for the printer.

For **Hewlett Packard Deskjet** compatibles (except DJ500) use *PrintDJ*.

For **Deskjet DJ500** use *PrintDJ500*

For **Hewlett Packard Laserjet** use *PrintLJ*

For **Canon BJ-10e** and variants use *PrintBJ*

Draft printing the current story (RISC OS 3 only)

This is only available with RISC OS 3 *!Printers*; you cannot use it with RISC OS 2 printer drivers. This provides a quick way to print the current story.

Load the printer module *DraftFF*. You can then drop the *Save text story* save icon onto the printer icon. This prints the current text story in 80 column mode on the selected printer. Effects such as italic, bold, and underlined are retained. Headers, footers and graphics are ignored.

Appendix 8: Loading alien file formats

One of the perennial problems in computing is compatibility. There are any number of software products on the market but the chances of one product understanding files created by another are slim.

Impression overcomes this problem by using loader modules - small programs loaded into Impression which convert from 'alien' text formats into a format that Impression can understand.

Loading Loader Modules

A Loader module is loaded into Impression simply by double-clicking on its icon in a filer window. You cannot load the same module more than once.

Converting a file

After loading an appropriate module, you can load files by dropping them onto an Impression window. The contents of the file are converted into Impression format.

Automatically loading modules

Loader modules can be automatically loaded by Impression when it starts up (described in *2.16 Customising Impression*). This is useful if you frequently want to load files from another source.

Note:

The *CSV* and *PipeDream* loaders require some working disc space. This means you cannot use them if the requested disc is almost full. To see the available space on a disc, click **Menu** on the disc icon on the icon bar. This displays a small menu; click on *Free* on that menu to display the free and used space on the disc.

Text files

You can always load text files and Impression format files. You do not need a special loader.

LoadASCII – Dummy loader

This loader is useful only if you have several loaders in Impression's *Auto* directory. Without this loader, if you drop a plain text file onto Impression, each loader asks if you want it to convert the file. *LoadASCII* is the first loader checked and, optionally, loads a plain text file without modification. To use it, copy it into the *Auto* directory.

Important:

LoadASCII is alphabetically the first loader and so is the first loader checked when run. Do not rename it or rename any of the other loaders so as to change the alphabetic order.

LoadBasic – Basic file loader

There are no known problems with these files.

LoadC – C source file loader

Both C language files and Impression's internal format make use of "curly brackets" ({ }). This loader reads in C files and correctly formats any such curly brackets.

LoadCSV – CSV loader 1

CSV files are often produced by spreadsheet programs and use commas (,) to separate a line of variables. This loader converts commas into *Tab* characters to restore the formatting into columns by generating any necessary Rulers.

LoadCSV+ – CSV loader 2

Use this loader instead of *LoadCSV* for CSV files that include tables or boxes. When the file is read, a horizontal line (rule-off) is drawn above each line of text and a vertical line (or rule) between each field. (In CSV files, a comma marks the end of each field.)

The last line should terminate with a *Return*; this ensures that a line is drawn under the text.

Two examples of its use

The basic CSV file (part of a PipeDream example file):

"Car Lovers Ltd"
"Company fleet"
,,"Value","Cpcity","Cyls","Reg"
"Porsche Carrera RS",,30,2700,6,"RS 27"
"AC Cobra Mk II",,90,4700,8,"289 COB"

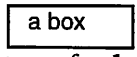
which, when loaded into Impression using *LoadCSV+*, looks like this:

Car Lovers Ltd				
Company fleet				
	Value	Cpcity	Cyls	Reg
Porsche Carrera RS	30	2700	6	RS 27
AC Cobra Mk II	90	4700	8	289 COB

A second example simply encloses text in boxes. The basic CSV file looks like this:

a box

and, when loaded into Impression using LoadCSV+:



Remember the *Return* after **box**.

LoadDTP – Acorn DTP loader

This loader can only handle text from Acorn DTP files and not graphics. There are no known problems with these files.

LoadFWP – FirstWord Plus text file loader

The loader can only handle text from FirstWord Plus and not graphics.

Some very early versions of FirstWord Plus on the Archimedes did not set the file types. If you have to set the file type use the *SETTYPE command. Press *F12* and type

```
*settype :0.fred AF8
```

assuming your file is called ***fred*** and it is on drive ***0***.

LoadIWord – Inter-Word loader

Files from the BBC versions of InterWord do not set the file types. If you have to set the file type use the *SETTYPE command. Press *F12* and type

```
*settype :0.fred D80
```

assuming your file is called ***fred*** and it is on drive ***0***.

If this is not done, the text will include many incorrect characters.

LoadPDream – PipeDream 3 loader

Because Impression and PipeDream use completely different ways of storing text and the information about it, it is not possible to get totally correct automatic translation between the two formats. However, this loader module significantly

reduces the work required to transfer *PipeDream* files to Impression.

There are some things this loader cannot cope with; these are listed below.

LoadPDream cannot cope with:

- Graphic files incorporated into files.
- Printer driver constructs.
- Colour constructs.
- The following commands are not supported;
  - Option Constructs (%OP%parameter value),
  - leading and trailing character format,
  - Slot is a number slot,
  - formulae - no calculations are done.

This loader maintains the appearance of multiple column text by using Tabs to format the text across a single frame. This means that later editing of the text in Impression will be difficult.

LoadPDream should accurately represent all the other commands of Pipedream.

PipeDream files from the Z88 and the PC

The PipeDream manual describes how to transfer files into the Archimedes. Archimedes files contain filetype information and files imported in this way will have the wrong filetype set. To correct this, use the `*SETTYPE` command. Press *F12* and enter the command

```
*settype :0.fred DDE
```

assuming your file is called `fred` and is on drive 0.

LoadReturn – Return stripper

The return stripper module takes *Returns* and *LineFeeds* out of text from packages such as PipeDream so that the text is continuous when imported into Impression, and not 'jagged' as happens when the text is just loaded straight in.

An example of a file without *LoadReturn*:

LoadReturn loader

The Impression 'loadermodule' LoadReturn will strip out unwanted Return and Line Feed codes from documents.

Any filetype will be processed by this loader module making it very general purpose.

And with:

LoadReturn loader

The Impression 'loadermodule' LoadReturn will strip out unwanted Return and Line Feed codes from documents.
Any filetype will be processed by this loader module making it very general purpose.
The stripper follows these rules:

1. any Returns or LineFeeds on their own will be stripped,
2. if more than one LineFeed or Return follow each other, then n-1 are stripped where n is the total number of consecutive Returns or LineFeeds,
3. a Return followed by a LineFeed is treated as a single Return character,

There are many ways in which text can be formatted just with *Returns* (code 13) and *LineFeeds* (code 10). Therefore the stripper follows these rules:

1. any *Returns* or *LineFeeds* on their own will be stripped,
2. a series of consecutive *Returns* is replaced by a single *Return*,
3. a series of consecutive *LineFeeds* is replaced by a single *LineFeed*,
4. *Return-LineFeed* is treated as a single *Return* character,

5. if there is no space before a *Return* or *LineFeed*, one is put in.

Rule 4 implies that *Return-LineFeed-Return-LineFeed* becomes a single *Return* (from rule 2).

The stripper translates files of any type. This could lead to unexpected results if correctly formatted files are dropped onto a frame after the module is loaded. Use the *Modules* dialogue box in *Preferences* on the Icon Bar Menu to remove *Load-Return*. (See *2.16 Customising Impression* for details.)

LoadRTF – Rich Text Format (RTF) loader

RTF is a standard way of transferring files between systems. Most programs on the Macintosh can load and save in RTF format, as can a fair number on the PC.

What is converted

Only file types *data*, *text*, or *pcdata* are converted by the RTF loader. Other file types are ignored.

Most features of RTF directly map to Impression format, but there are a few differences. These are summarised below:

- Any ruler effects are turned into Impression styles and rulers.
- The following commands are not implemented:
  - document information,
  - colour information,
  - paper width, height, margins,
  - headers and footers,
  - page numbers,
  - top, left and right borders (see note),
  - shadowed and double borders are the same as thick borders (see note),
  - super/subscripts are of a fixed displacement,
  - pictures (bit-map and include pictures) are ignored.

Note:

These features can only be imported if they are RTF styles; if they are RTF effects, then they cannot be imported.

Transferring RTF files to the Archimedes

Unless both machines are connected by a network, transfer files using PC format floppy discs. (If you have RISC OS 2 you require a suitable program to read PC format discs).

Word for DOS

One of the Word discs contains a converter program to output RTF. (Only recent versions of Word include this converter; if you have an older version, contact Microsoft about upgrading.)

Word for Windows

You can select RTF format in the Save as: dialogue box. The name you save it as can be up to six characters long, plus (optionally) an extension of *.RTF* (for example, *FILE.RTF*).

Word on the Macintosh

Again you can select RTF as a save format. Most current Macintoshs can write to DOS format discs.

LoadView – View file loader

There are no known problems with these files.

LoadWP42 – WordPerfect loader

The WordPerfect loader converts version 4.2 or earlier. The loader converts all WordPerfect text effects into Impression effects. All commands ar implemented except:

- hyphenation 'hotzone',
- page numbers,
- headers and footers,
- pitch/font changes,
- printer specific commands,
- columns,
- date/time functions.

LoadWStar – WordStar loader

The WordStar loader converts versions 2.2x to 4.0. (MicroPro – the developers of WordStar – will not release the file format of later versions.) If you have WordStar 5.0 or WordStar Professional, you can use the WordPerfect option in ***Star exchange*** to output the data in WordPerfect format. You can then use *LoadWP42* to load the file into Impression.

Only these options are implemented:

- type styles:
  - italic,
  - bold,
  - underline,
  - subscript,
  - superscript,
- full justification.

Wordwise Plus files

To use Wordwise plus files in Impression you must first remove any embedded commands and change the character denoting *Tab.*

1. Load the file into Wordwise Plus.
2. If any tabs are used then do a search and replace specifying **|*T*** for the search string and **|*I*** for the replace string. The | symbol is the broken vertical bar found on the \ key in the top right of the main keyboard.
3. Press *Esc* to go into the editor. Find and delete all embedded commands.
4. Save out the file under a new file name.
5. Load this file into Impression as plain text.

For your notes

For your notes

For your notes

For your notes

For your notes

For your notes

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Commercial Printing Guide

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Our thanks to Arlon Printers Ltd. of Kings Langley for their assistance in creating this manual.

What this manual covers...

You should read this manual if you are preparing documents that will be printed in quantity. It covers:

- An introduction to the different printing methods.
- Points to note when creating documents to get the best results.
- How to prepare documents for typesetting (also called *imagesetting*).

Different printing methods

Most of this manual covers *litho printing* (*lithography*). This is probably the most common printing method for print runs of more than a few hundred copies. It is a well established process (although some parts of the technology are still advancing). It is suitable for most types of work from a few hundred leaflets to multi-page newspapers. However, it is unsuitable for short runs (below 300-500 copies) for which photocopying is a suitable alternative.

There are other printing methods not covered here. Some – such as letter-press – are rarely used today. Others – such as Intaglio – are only suitable for very long runs; 50,000 as a minimum.

Photo-copying

For short-runs (up to about 500 copies) this is an economic process. Also there are relatively few technical problems in producing originals for photo-copying. Quality depends on the model and condition of the photo-copier and the skill of the operators.

Black-and-white copying is a well established technology and gives excellent results. Most towns have several bureaux or instant print shops which can copy work for you.

Colour photo-copying is relatively recent. Because the technology is evolving so rapidly, any information we might give will soon be

out-dated. The best advice is to talk to your local copy bureau. Currently some processes cannot accurately reproduce the entire colour range. Try a sample print of your original for colour reproduction.

For photo-copying you need a good quality original. For black-and-white work a laser printed original is ideal. For most work a bubble-jet printer can produce originals of sufficient quality. Remember – the better the original, the more likely you are to get good copies.

Litho printing

This is a very brief description. There are many books available on printing if you want more information.

Printing, like most trades, uses lots of jargon and technical terms. We have limited the jargon to a few common terms you might come across. Jargon is shown in *italics.*

A printing machine cannot use your original directly. Instead, the image is transferred onto a ***Printing plate***. (Often just called a ***Plate***.) How the image is transferred is described later.

The plate is then mounted on the printing press (***press*** for short). As the press runs, the image on the plate picks up ink from a reservoir. That ink is then transferred, via a rubber roller, onto the paper. This prints one colour of ink onto the paper.

Most presses can only print one colour at a time. To change the colour the printer has to clean the existing ink out of the reservoir (this is called ***Washing-down***), change the plate, set the machine up again and print the paper a second time. This takes time and of course you, the customer, get charged for it.

More complex presses can print two or more colours in one pass of the paper through the press. The drawback is they need skilled operators and they take longer to set up at the start of each job. This means they are only suitable for long print runs (several thousand copies).

Transferring your document onto a printing plate

It is possible to transfer the image directly from a computer onto a printing plate. However, at present (March 1994) only a few companies possess the necessary equipment.

So, for now, you probably have to use less convenient methods. This involves producing an ***original*** (often called ***Camera-ready artwork*** or a ***mechanical***). The printing company uses this original to create a printing plate. For simple black-and-white work you can produce the original on a laser printer or, at a lower quality, a bubble-jet printer.

Higher quality and colour work requires an typeset‡ original. For this, you generate Impression or, more commonly, PostScript disc files. You take or send these files to an typesetting bureau and get them to produce the original on a machine called, not surprisingly, an *typesetter*. There are two types of material used in typesetting:

- photographic paper (referred to as ***Paper*** or ***Bromide***), or
- film.

Bromide is cheaper but, because it has to be photographed to produce the plate, is not suitable for the best quality work. Film can be used to make the plate directly and so there is no quality loss. Film is also preferable for multi-colour work. The printing company will know which is the best material for a particular job.

Printing a range of colours

Many documents can be printed with just one or two different coloured inks. (Two or three colour printing is sometimes called ***Spot colour work***.) You can extend the range of any basic colour by using tints. For example tints of black give shades of grey; a medium red tint is pink.

Printers can only print dots of solid colour. However, software in the printer can group these dots into larger dots or clusters and

‡ ***Imageset*** *and* ***Typeset*** *are generally used interchangeably.*

then print only some of the dots in the cluster to create the tint. The individual small dots are measured in *dots per inch* (dpi). The clusters are measured in *lines per inch* (lpi).

The clusters are arranged on a regular grid called a ***Halftone screen***. (The halftone screen is completely different to the monitor screen attached to your computer. Originally a halftone screen was a sheet of engraved glass. In the computer, halftones are generated mathematically.)

You can easily see the clusters at lower settings (60-90 lpi). (Most 300 dpi laser printers use a 60 lpi screen. This is too coarse for high quality work.)

Very light tints (less than 10%) or very dark tints (over 95%) rarely print satisfactorily. The very light clusters required for light tints cannot carry enough ink and so do not print reliably. Conversely, the heavier clusters of dark tints carry too much ink and merge together to print as solid colour.

For monochrome work – work using only one ink colour – a screen of 100-120 lpi is sufficiently fine to deceive the eye into ignoring the clusters.

Colour work requires an even finer screen, usually 150 lpi. (Very high quality work, such as fine art books, uses screens of 200 lpi or more. However, these use photographic rather than computer production methods.)

Different screens – left to right 45, 90, 120 lpi

When outputting to a PostScript device, you specify the default screen in the *Print* dialogue box. Individual graphics can have a different screen (as in the above illustrations) set using the *Alter graphic* dialogue box. Any value set in *Alter graphic* overrides the default setting.

Full colour printing

Sometimes you want the full range of colours. The requires ***Full-colour*** or ***Four-colour printing***. Most colours can be represented by combinations of just four basic inks – Cyan, Magenta, Yellow and Black (CMYK – black is called the Key, K, colour). These are the ***Process colours***. In theory, combinations of equal amounts of pure cyan, magenta and yellow produce black and the range of greys. In reality, the inks are not pure colours and you get a muddy brown instead of black. There are other problems with murky shadows and text lacking crispness. Also creating black by printing three inks can swamp the printing press with excess ink. Hence the addition of black. Publisher includes an advanced colour separating system to ensure that blacks and shades of grey are printed using only the black ink and not from a mixture of CMY.

Impression can separate the document into its CMYK components and create a disc file with this information. This is called ***Separating the document***. There is more information on producing separations later in this manual.

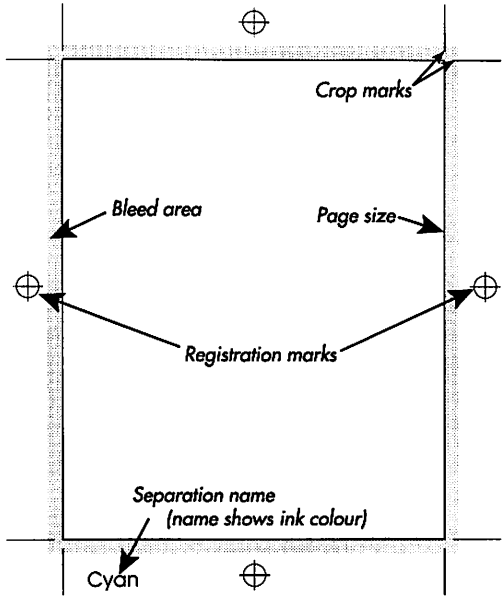
Spot colour work

If you want to use spot colours rather than full-colour, use CMY to represent the spot colour. You can then produce the appropriate separation and then, instead of printing it in cyan, magenta, or cyan, use available ink colour.

Printers' marks

The *Print* dialogue box has options for the commonly used printers' marks such as registration marks, separation names and crop marks. This section explains why the various marks are need.

The bleed area (shown below) is described later in *Choosing an appropriate page size.*



Registration marks

These are almost essential for multi-coloured work. They appear in exactly the same position on each separation so that the printing company can align the separations when preparing the plates and during printing.

Separation names

Each separation can be marked with its ink name. This confirms to the printing press operator that the correct ink is being used. Again, almost essential for multi-colour work.

Crop marks

These are short lines beyond the printable area which show the outer edges of the page size. Essential for work that is cut or trimmed to size after printing.

Planning your document

A small amount of thought before you start can save you time and money later on.

Some advice...

First and most important – talk to the printing company before you start. Or talk to the magazine publisher if that's where your work will be printed. Printers are generally helpful people and well used to giving advice. (After all, they want to avoid problems when the job finally reaches the printing press.) They will tell you the required format (film or bromide) and maximum halftone screen for a particular job.

A second piece of advice is don't get too ambitious too soon. Full four-colour printing is a very complicated, skilled and expensive process. If possible, start with simple jobs. Also spot colour work is technically simpler than four-colour. Two or three spot-colour work is always cheaper than full four-colour.

Choosing an appropriate page size

The default size of an Impression page is A4 (210x297 mm). If this is unsuitable for a particular job, you can change it at any time. However, it makes sense to set the page size before you start.

Impression provides several predefined master pages. You can:

- use one of these,
- create a new master page based on an existing page or
- create your own master page.

For more information on master pages see *3.8 Master pages* in the main manual.

There are two problems if text or a graphic prints close to the edge of the paper:

- Very few printing presses can print to the edges of a sheet of paper. There is usually a non-printing margin around the edges that is gripped by the paper-feed mechanism. If

parts of your document are close to the edge of the page, the printing company may have to use a larger size of paper and then trim it to size afterwards. This can increase paper and production costs.

- The printed area needs to continue beyond the finished page size to allow for any errors when trimming to final size. This is called ***bleeding***. Normally a bleed of 3mm is sufficient. You can specify a bleed when you create a master page. Again bleeds increase the size of paper required.

If you change the page size slightly, the printing company may be able to make maximum use of the sizes of paper suitable for their presses. Most presses use ***A*** paper sizes. Small presses use ***A4*** (210 x297 mm); larger presses ***A2*** (297x420 mm) or ***A3*** (420x594 mm). In fact, most A2 presses can handle slightly larger paper (***SRA2***) which can print a full A2 page plus crop marks. (Or two A3 pages or four A4 pages.)

Registration black

Registration black *button in the Colour Picker*

This is a special colour. Anything in registration black appears in all separations. This is useful if you want to include information such as a file name or production date on a set of separations. Except for such information, you should avoid using registration black in your document.

Colour limitations

2.10 Colour handling in the main manual gives further information. This section gives some information specific to printing.

The available range of colours

CMYK can reproduce a wide range of colours. However they cannot reproduce the entire spectrum. Some colours such as bright red or turquoise are completely unattainable.

Colour differences between the computer screen and the printing press

The computer screen *emits* combinations of red, green and blue (RGB colour model). The printed page *reflects* cyan, magenta, yellow and black (CMYK model). There are therefore differences between how colours appear on screen and on the page. Even the colours on the screen can alter dramatically with changes in ambient lighting and screen brightness and contrast.

Some colours that are easily reproduced in RGB give problems in CMYK. An example is deep blue. In RGB this is 100% blue. The direct translation to CMYK is 100% cyan and 100% magenta. Unfortunately magenta usually dominates slightly and the resultant colour has a purple tinge. (A better dark blue is usually a cyan/ black mix.)

The normal 16 colour screen palette does not show cyan or magenta correctly. (Magenta and red appear as the same colour.) *FlipTop*, a utility supplied with ArtWorks and Colour Card from Computer Concepts, lets you improve the colours shown on screen. The *Printer* palette simulates the range of colours available on a CMYK printing press. In particular, very bright, florescent colours that are impossible to reproduce on printers are toned down when using this palette.

Even using the Printer palette, the colour that appears on a printed page can be substantially different from the colour you perceive on the screen.

Technical limitations of the printing process

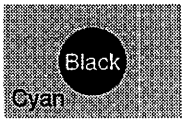
The press is constantly drawing ink from its reservoir, passing it over various feed rollers, onto the plate and finally onto the paper. How much ink flows onto the paper depends on the settings and

condition of the press, the type of paper used and environmental factors such as the temperature and humidity. Obviously many of these factors are constantly changing. A skilled press operator has to adjust the press whilst running the job to ensure a consistent result. Invariably there will be minor differences in the colour balance during the print run. These should be relatively minor with a good printing company.

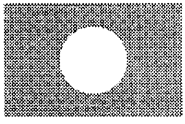
Secondly, for a specific spot colour the printing company usually has to mix a batch of ink from other basic colours. They have charts showing the proportions to use but obviously it is difficult to get the proportions exact. This is a particular problem with off-white shades where the proportions can be as high as 95 parts white to 1 part modifying colour. These shades are almost impossible to mix consistently.

Using overprinting

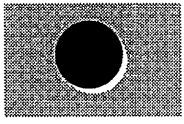
Overprinting is used for multi-coloured work to compensate for misalignments during printing. If your document includes overlapping objects which use different ink colours, misalignment can create thin white or coloured lines between the objects. (The technical term is ***out-of-register*** or ***misregistration***.)



How does this happen? Suppose your document has a black circle on a cyan background with no overprinting.



When the illustration is separated, the cyan plate has a non-printing area underneath the circle. (The technical term is that the circle ***knocks-out*** the background.) The knock-out is precisely the same size as the circle.

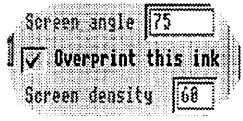


If the illustration is not printed exactly in register, a white crescent appears between the circle and the background. (We have exaggerated the effect but even thin lines can be noticeable with dark colours.) To compensate for this you use overprinting. This is generally used for black ink (which is relatively opaque). Underlying colours are not knocked out and the black ink is simply printed on top.

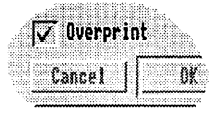
Less opaque inks may show a colour shift when overprinted. For example, magenta and yellow overprinted gives red. Note that only areas of solid ink overprint. Tints always knock-out underlying inks.

You can set overprint in two ways:

- Ink level. Set in the *Print* dialogue box.



- Application level. Set using the Colour Picker.



  You can specify individual applications of this colour to overprint. (For example, to overprint some text but not all.)

How you use overprint depends on the requirements of a particular document. Impression provides you with the flexibility you need in applying overprint where appropriate.

Checking and proofing your document

The computer monitor has a lower resolution than high definition printers and typesetters. Also, as already described, the colours shown on screen can differ from what will be printed. For this reason, you normally have to proof your work before it is printed. There are various proofing processes which give a good representation of the finished result.

For quick checks you can just print the document to the printer connected to your computer. You can spot many potential problems in this way. For black-and-white work this is often good enough for checking your work. However there are differences in tints between your computer's printer and typesetters – dark tints appear darker on a typesetter and light tints lighter.

The biggest need for checking and proofing is when using colour. In fact, for four-colour work, proofing is almost essential. (Proofs are expensive but not as expensive as re-printing a job that has gone wrong!)

While you are preparing the document you can check how the colour separations should appear by using *View* ⇒ *Separation*. This displays on screen how the individual colour separations should look. *Separation* is useful for checking that the overprint settings are correct and for colour components. The lower resolution of the monitor screen limits the amount of detail that you can see, but this option helps build your confidence that the separations will be correct. At *View* ⇒ *Quality* 11 the separations are shown in their ink colours; *Quality* 10 or below shows the separations in black.

There are a wide range of colour proofing methods ranging in quality and cost from colour ink-jet printers to printing proof copies on a special printing press. (Printing proof copies gives the best results but is far too expensive for normal use.)

Colour ink-jet printers are now relatively low cost and can provide reasonably accurate colour proofs. The cost of printing a page is relatively low (less than a pound). Because of the low cost, they are also useful during the planning stage when you are trying to visualise the finished document.

For four colour work, the best practical results come from ***Cromalin*** or ***Matchprint*** proofs – *Cromalin* is used as a generic term. (*Cromalin* is a DuPont process; *Matchprint* is 3M's equivalent. Differences between the two processes are small.) These are produced directly from the set of four film separations and give an excellent colour match. Cromalins are expensive – about £30-£70 for an A4 page (plus the cost of producing the film separations). Not many companies can produce them but the printing company or typesetting bureau will know local availability.

Getting your document typeset

First you have to find an typesetting bureau. There are almost certainly several in your area; look in *Yellow Pages* and other local directories under *Typesetters*. Some bureaux that can handle Archimedes discs advertise in the specialist Archimedes magazines. However, not every bureau will offer the services you want and some will give a better service and price than others.

What to ask a bureau...

When looking around for a bureau, here are some of the questions you should ask:

- **What format discs can they read?** A few bureaux can read Archimedes discs. One that can will save you a lot of work. Can they read Impression discs; if not, you will have to supply them with PostScript files.

  If they cannot read Archimedes discs, you generally have to supply PostScript files on PC format discs. Make sure, however, that they can read 3" discs and not just the older 5" discs.

  Many bureaux use Apple Macintosh computers. Most of these can read PC format discs. However, complex pages may be too large to fit on a floppy disc. Available from Computer Concepts is *MacFS*, a utility that lets Acorn computers read and write Mac format discs such as Syquests, optical discs, or hard discs, which can hold several Megabytes of data.
- **What do they charge per page?** This depends on the size of the page and whether you want film or bromide. Also, ask them if they have a surcharge on pages that take a long time to print. This can seriously increase your costs if your document includes complex illustrations. Some bureaux charge on a time basis, others on material used. Also, check if they have a minimum charge.
- **How fast can they turn work round?** Invariably, getting work set quickly is sometimes a priority. Some bureaux

only offer a mailing service – you send them a disc, they send the results back. This may only take a day, but you may need results faster than that. Other bureaux can sometimes offer a 'while you wait' service. (If it's a quiet day and they have the correct material loaded in the typesetter, many bureaux will try to fit in urgent work.) Often there's a premium for this and some bureaux offer this service only to regular customers.

- **Can they set the page size you want?** Different typesetters have different maximum page sizes. Generally there's no problem up to A3 but many bureaux cannot set larger sizes. Linotronic 300 typesetters have a maximum width (across the film or paper) of 304.4 mm.

  Remember crop or registration marks increase the overall dimensions of the document. Impression automatically calculates any additional extra width and height and optionally stores this information in the disc file.

- **Do they have the fonts you want?** The quickest way to set any text in your document is to use an equivalent font in the typesetter. However, some Archimedes fonts have no PostScript equivalent. Also the bureau may not have the particular font you require. (PostScript fonts are generally far more expensive than Archimedes fonts.)

  See below for details of matching fonts and, for RISC OS 3, how to download unmatched fonts.

  Some bureaux ask for a list of fonts used in the document. *Utilities* *Compile font usage list* creates a separate document listing the fonts used. You can then check this list against the list of matched PostScript fonts.

Font matching

Equivalent Acorn and PostScript fonts often have different names. (Many PostScript names are proprietary trademarks.) You have to match the two names before you can use the PostScript font. The PostScript printer drivers contain a default list of equivalent names but you may want to add new fonts to the list. How you do this depends on which version of RISC OS is fitted in your computer.

If you have RISC OS 2:

We recommend upgrading to RISC OS 3. The PostScript printer driver for RISC OS 3 provides extra features that Publisher takes advantage of. Also, font matching is simpler (see below).

If you have RISC OS 3:

RISC OS 3 gives you three options for fonts:

- Map the Acorn font name to the PostScript font name. (This is the recommended method but there must be a matching PostScript font available.)

  If the bureau asks for a list of fonts used in the document, they are only interested in mapped fonts.
- Send the Acorn font to the typesetter, run the file and then delete the font from the typesetter. (***Download the font***.) Downloading the font increases the file size and increases the time required to send the file. However it allows the use of any Acorn font, even those without a PostScript equivalent.
- Send the Acorn font, run the file but leave the font resident in the typesetter. (***Permanently download the font***.) You can only permanently download a font if the typesetter is connected to the Archimedes. We cannot recommend permanently downloading a font. The downloaded fonts occupy memory in the typesetter even after your file has run. The bureau may have to reset and reinitialise the typesetter to regain the memory. This takes time and is annoying to a busy bureau – it will not help create a good working relationship with them.

Mapping fonts:

On RISC OS 3 Application Disc 1 is *FontPrint* which provides an easy way to map fonts. (Remember to punctuate the PostScript font names correctly – check with the bureau if in doubt.)

Refer to the RISC OS 3 *User Guide* for details of using *FontPrint.*

Downloading fonts:

Any unmapped fonts are automatically included in a PostScript file. They are then downloaded to the typesetter when the file is run.

As described above, downloaded fonts increase the file size and the file takes longer to load. Tell the bureau if your file includes several downloaded fonts. They can then allow extra time for the file to load and not assume a fault.

Creating a PostScript file

Load a suitable PostScript printer driver. Use *PrinterPS* for RISC OS 2. With RISC OS 3 you have a wider choice. Use *Generic* for output to a colour PostScript device. Use *Generic, Linotronic 100,* or *Linotronic 200* for separated output. In all cases set the printer driver to ***print to file***. (The *User Guide* supplied with your computer describes how to do this.)

Display the *Print* dialogue box in Impression.

Set these options (§ denotes check with the printing company if you are not sure):

- *All/From-To* – this depends on several factors such as the complexity of your document. Often you can fit several pages into one PostScript file. However we recommend that files should contain no more than 10-15 pages. This is usually a convenient number of pages for the bureau to handle.
- § *Copies.* Check with the printing company how many copies of the original they need. Sometimes two or more copies can be printed at the same time on a large sheet of paper. This may save you money.
- *Pause* ***off***.
- *Scale* as appropriate.
- *Fit lots* ***off***.
- *Upright* or *Sideways* orientation as appropriate.

Click on *Setup...* to display the *Print Setup* dialogue box. Most options are ***off*** except:

- *Ignore page border*
- *Centre pages*
- *Left/Right pages* as required.

Click on *Typesetting...* to display the *Typesetting print options* dialogue box:

- § *Separation names* & *Registration marks*. Set these for multi-ink work as they help the printing company. *Separation names* prints the name of the ink on each separation. *Registration marks* prints alignment targets around the image area. (These were shown in an earlier section.)
- § *Crop marks*. These were described earlier.
- *Full colour/Separations*. *Full colour* creates a single file covering all the colours. Use this when sending to a colour PostScript printer or if you want to print a colour document in a single ink colour.

  Separations creates information about a single ink colour. Use this when you want multi-colour printing.
- *Ink names*. The main manual fully describes this section. Basically you can select from the list which inks to send to this file and which inks to overprint.

  A tick against an ink name shows that the ink will be printed.

  A solid circle shows that everything in that ink will overprint. (Normally you would never overprint any colour except black.)
- *Screen angles*. Unless you are very experienced in creating PostScript separations, select *Use recommended angles*. The recommended angles are carefully calculated to avoid interference (or moiré) patterns. Although these angles were created for Linotronic typesetters, they should also be suitable for typesetters from other manufacturers.

  (See below for changing the screen angles file to cater for other resolutions or recommended angles.)
- *PostScript screen* – ***on.***

- § *Screen density.* Usually 100-120 for monochrome work, 150 for four-colour.
- *Screen type* – use the default setting unless you are experienced in creating typeset originals.
- § *Reflect pages* – use this to create a mirror image.

  Bromide is normally *Reflect pages* ***off***.

  Film is usually, but not always, ***on***. Ask the printing company what is required. Set *Reflect pages* ***on*** if they ask for *emulsion side down*; ***off*** for *emulsion side up.*
- *Printer resolution.* Check with your typesetting bureau. For Linotronic typesetters ***1270dpi*** is generally used at up to 120lpi and ***2540dpi*** above 120lpi. Most typesetting is at 1270dpi and so the bureau may charge extra for changing the machine settings to 2540dpi.

Check that the dialogue boxes are correctly set-up and then click on *OK* to create the PostScript file. If you want to create further files (if the separations are too big for a single file), change the filename, the page number range or the selection of inks and then create another file.

Changing the screen angles file

This file contains a list of the recommended screen angles for Linotronic typesetters. If your bureau uses another type of typesetter, they may know the appropriate screen angles. You can then edit the screen angles file to include these new angles.

Please note: the suppliers of Impression cannot be held responsible for any problems that may arise if you change the screen angle file in any way. It is your responsibility to ensure that any data you enter is accurate, suitable for the target typesetter and in the correct format. We do not have any information about recommended screen angles other than those already in the file and so cannot offer advice about possible changes.

To change the file:

1 Hold down the *Shift* key and double-click on the Impression icon in a directory window. This opens a window on the contents of Impression. **Do not change or delete any**

of these files – Impression may stop working or corrupt your documents if you do.

2 Double-click on *Resources*. This opens a second directory window.

3 Double-click on *ps*. This opens a third directory window.

4 Load the screen angle file *SepAngles* into a text processing application such as *Edit*.

5 The format of the file is:
Resolution – the resolution setting of the typesetter.
From – the lowest value halftone screen to which these angles apply. (Most recommended screen angles apply to a band of halftone screens.)
To – the highest value halftone screen to which these angles apply.
For each ink, in the order CMYK, specify:
the screen frequency, and then
the screen angle.

When you send the disc to the bureau...

You can now send or take your discs to the typesetting bureau. Remember to tell the bureau:

- Wether the file format is Impression or pure PostScript text.
- The number of pages that should be produced and their size.
- Whether you want paper or film.
- Some typesetters can invert the image (create a negative). Check with the printing company. Say if you want this.
- Tell them which files should be on the discs. If you send them the wrong disc, they may spot the mistake before running – and charging you for – the wrong files.
- Say if you think the files may take a long time to run. Some bureaux don't let jobs run over a certain time unless you tell them otherwise. They might stop a file that's taking a long time thinking it has crashed.

When you get the typesetting back...

Check it carefully. You can still correct errors relatively cheaply. From this stage onwards it becomes increasingly expensive to correct errors.

Remember you can use *View ⇒ Separations* to check how the individual separations should appear. This is useful for checking overprint and font matching.

On the typesetting look for:

- Any mistakes in the document. The higher resolution of typeset output can show problems not previously evident. Is the document complete?
- Check that the text appears correctly. Any fonts not loaded into the typesetter will appear as Corpus (`which looks like this`). (Corpus is Acorn's name; Courier is the PostScript name for the equivalent font.) Also there may be slight differences between the same name font from two manufacturers.
- Any physical defects in the material. These are rare but not unknown.

If you want a Cromalin colour proof you can get this made now from the set of typeset films.

If one film out of a set of separations has a mistake

Sorry, but you may have to re-run a complete set of films. It depends on the age of the set of films and how closely they need to align (the register). Films stretch slightly as they pass through the typesetter. Also the films age and distort slightly. If you get only one film reset, it may not align with the others. Check with the printing company but if in doubt, get a complete new set. It will be cheaper than having to reprint your work if there is a problem.

Sending your work to the printing company

You should now have everything necessary for the printing company to start work. Send them:

- The camera-ready artwork.
- For colour work a Cromalin or other colour proof. This helps them assess the required colour balance.

Tell them:

- The ink colours to use. (Tell them even if you just want black ink.)
- The required paper type and colour. (Tell them even if you want ordinary white paper.)
- How many copies you want.
- The finished size of the printed image.
- Any finishing instructions (extras such as folding or laminating).

Much of this information the printing company will already know from your earlier discussions with them. However, they generally prefer confirmation that nothing has changed since then. Full information may save them a telephone call and helps build a good working relationship.

If you have followed this guide, the final printed result should be exactly as you expected. (Often it looks even better when professionally printed.) You should be able to spot any mistakes or problems at an early stage and correct them easily. (Remember, that at each stage it becomes progressively more expensive to correct a mistake.)

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Equasor

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1. Introduction

$$x = -\frac{R}{2L} \pm \frac{1}{2}\sqrt{\frac{R^2}{L^2} - \frac{4}{LC}} \qquad \lim_{\delta \to 0} \frac{\delta y}{\delta x}$$

Equasor is an equation building application developed specifically for the Archimedes range of desktop computers.

Much of the difficult and tedious work in creating complex equations is completely automatic. For example, enclosing brackets automatically increase or decrease in size to match the text inside them. Limits and powers are automatically scaled to 75% of the size of the preceding text. Many arithmetic functions (such as square root) can be selected simply by clicking on an icon.

You will find that you are very quickly able to create complex equations. (And, to help you even more, there is a brief tutorial in this manual.)

Once an equation has been created, it can be saved as a graphic 'Draw File'. It can then be incorporated in any RISC OS application supporting this file format (most do).

If you have used Computer Concepts' document processor packages, Impression and Impression Junior, you will find many of the concepts of Equasor are already familiar to you. You will find more information later in this manual on using Equasor with Impression and Impression Junior.

About this manual

This manual is organised as follows:

Introduction This describes some of the concepts and basic building blocks of Equasor. You should read this before using Equasor.

Installation How to install the software onto your Archimedes or BBC A3000.

Using Equasor Brief details of how to use Equasor. Refer to this section if you are not sure which facility to use.

Tutorial You are taken through creating a sample equation which uses examples of the facilities available to you.

This chapter contains a number of useful tips on using Equasor. You will probably find it helpful to read through this chapter even if you don't build the sample equation.

The next three sections describe in detail the facilities available in Equasor.

Tools
Main Menu
Icon Bar Menu

Appendix 1 The characters available in the *MathGreek* and *Equasor* fonts supplied as part of the Equasor package.

Appendix 2 A list of short-cuts available from the keyboard.

Appendix 3 How to map the *MathGreek* into the PostScript printer driver.

Help desk

We hope that you have no difficulties using Equasor. However, if you do and cannot find the answer in this manual, then we operate a technical help-desk. It is available Monday to Friday, between 1.30 p.m. and 4.30 p.m. on 0442 63933. You will be asked for the serial number at the top of your registration card so remember to keep a note of it. You may also be asked for the version number of the Equasor software. To find this, refer to the section in **Main Menu** describing the **Info** box.

This service is only available to you if you have returned the registration card supplied with Equasor.

Archimedes and A3000

Where we talk of the Archimedes we mean all models of the Archimedes range plus the BBC A3000.

Typographic conventions

In this manual we use these conventions:

Menu options
Where you can choose an option from the menu, the name of the option is shown in **bold:** e.g. **Save equation.**

Keyboard characters
Characters you type on the keyboard are shown in *italics.*

Return means the key marked '↵ Return'
Space means the Space Bar
F1 to *F12* means the function keys along the top of the keyboard
Ctrl-A means hold down the *Ctrl* key and type *A* or *a*
Shift-A means hold down the *Shift* key and type *A* or *a*

←, ↑, →, and ↓ are the four arrow keys to the left of the numeric keypad.

Concepts and building blocks

This section describes some of terminology used in Equasor.

Text

We use **Text** as shorthand for characters typed on the keyboard, selected directly from the MathGreek font or from the operators display, or entered from any other source.

Equation

We use **Equation** as shorthand to mean any block of text that forms a distinct entity. It could be a conventional equation or a part of one or a formula – Equasor does not distinguish between any of these.

Document

You can think of a document as a sheet of paper. You can create several separate equations on a document exactly as you can on a sheet of paper. You can change an equation without affecting any others on the same document.

Unlike a sheet of paper, you can slide equations around on a document either to make more space for another equation or to create a more logical layout.

Clipboard

This is an invisible temporary store and is used like a physical clipboard. You can cut or copy a piece of text from an equation (or even a complete equation) and put it on the clipboard. That text can then be transferred to another part of the same document or to a different document.

The clipboard can only hold one item at a time. Placing something on it overwrites any existing contents.

Mouse buttons

We use the normal Acorn terminology:

Select is the left-hand mouse button.

Menu is the centre button.

Adjust is the right-hand button.

Where we don't specify a button, use **Select**.

In menus and dialogue boxes you can use either **Select** or **Adjust**.

- If you use **Select**, the requested action is performed and the menu or dialogue box is removed from the screen.
- If you use **Adjust**, the same action is performed but the menu or dialogue box remains on the screen. This allows you to continue choosing options from the menu or changing the dialogue box.

Mouse pointer

The mouse pointer can have two forms.

- For entering or editing text, it is the conventional arrow-shape.

- For dragging text around on the document or the document around in the window, it is hand-shaped.

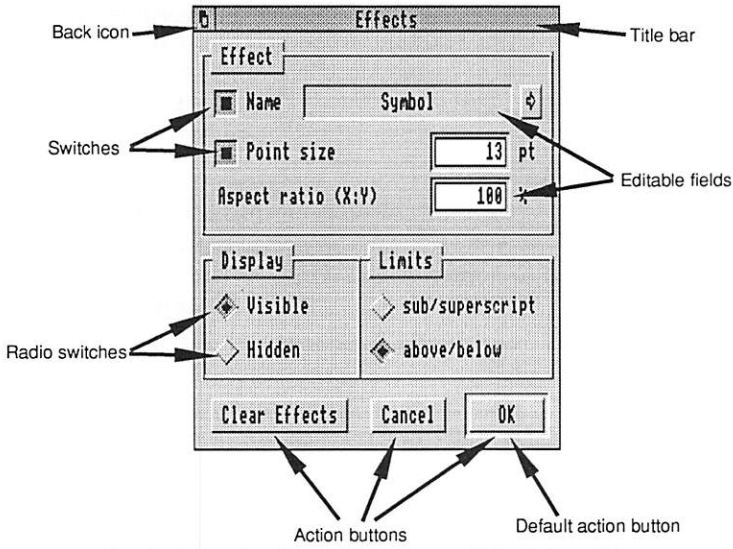
Text cursor

This is the conventional 'I' shaped cursor. You can move the cursor either using the arrow keys on the keyboard or by positioning the mouse pointer and clicking **Select**.

You can only add text at the cursor position.

Using dialogue boxes

Dialogue boxes allow you to make several changes at once. An example is the Effects dialogue box:



The dialogue box has a Title bar and Back icon like a conventional window but does not have a Close icon nor can it be rescaled.

Action buttons

These are grouped along the bottom of the dialogue box.

Changes that you make in a dialogue box do not immediately change the document. So, if you make a mistake or change your mind, click on the **Cancel** button to discard any changes you have made in the dialogue box.

The document only changes when you click on **OK** or, for this dialogue box, **Clear effects**.

The **OK** button is surrounded by a yellow moat to show that it is the **default action button**. This means that pressing the *Return* key on the keyboard has the same effect as clicking on the button.

If you click **Select** on one of the action buttons, the requested action takes place and the dialogue box is closed and disappears from the screen.

If you click **Adjust** on one of the action buttons, the requested action takes place but the dialogue box remains on the screen. This is useful if you want to make a series of changes and want to see the effect of making each change. If you click **Adjust** on the **Cancel** button, any changes you have made are discarded and the dialogue box shows the original values.

Editable fields

There are two types of editable fields

- those where you can choose from a limited range of options (usually a list of fonts), and
- those where the range is wide (usually numeric values).

Some editable fields have a switch to the left of their name. Before you can enter a value into the editable field, this switch must be **on**. When **on**, it appears recessed into the dialogue box and has a red square in its centre. Click on a switch to alternate between **on** and **off**.

Limited range of options

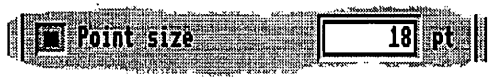
In the illustration, **Font name** is an example where you can choose only from the available fonts and so have a relatively limited range of options.

To display the menu, click on the arrow to the right of the editable field.

Choose a new option in the usual way by clicking on its name on the menu.

To remove the menu from screen, click anywhere on the visible part of the dialogue box.

Wide range of options



These editable fields allow you to type in a value, usually numeric. To select, position the mouse pointer over the box and click **Select**.

You can move between editable fields of this type by

- using the ↑ and ↓ keys, or
- using *Shift-Tab* and *Tab*.

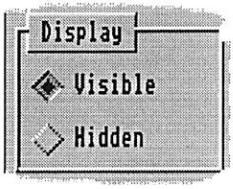
Shift-Tab and ↑ moves to the left or up; ↓ and *Tab* moves to the right or down. If the bottom-right editable field is selected and you press the ↓ or *Tab* keys, the cursor moves to the top-left editable field. Similarly, if you press the ↑ or *Shift-Tab* keys, the cursor moves from the top-left editable field to the bottom-right editable field.

Ctrl-↑ moves the cursor directly to the top-left editable field. Similarly, *Ctrl*-↓ moves the cursor directly to the bottom-right editable field.

You edit the contents of an editable field in the conventional way:

- use the ← and → keys to move the cursor to the left or right,
- use the *backspace* key to delete the character to the left of the cursor,
- use *Copy* to delete the character to the right of the cursor,
- use *Ctrl-U* to clear the box,
- enter new text by typing on the keyboard.

Radio switches



These are small diamond shaped switches displayed in groups of two or more and are used to select one option from several in the group. In the diagram there are two such groups:

Visible or Hidden, and
sub/superscript or above/below.

The selected switch is shown with a small red diamond in a dark grey surround. (In the illustration, the selected switch is **Visible**.) The other switches are shown in light grey.

Only one switch from the group can be selected at any time. If you select a switch (by clicking on it), the previously selected switch is deselected.

Basic typography

Typography (the appearance of printed text) is a vast subject. There are, however, a few basic words and phrases which need explaining.

Font or typeface

This describes the appearance of the text. A font is carefully designed so that all the characters in it fit neatly with each other in any combination. There are hundreds of fonts available; often the differences between them are very slight.

Font family

It is unusual for a font to have only one style (unless it contains symbols or other specialised characters). Normally, several variations are available and these variations form the **family** of the font. For example, the Trinity family supplied with the Acorn font manager has four fonts:

Trinity Medium
Trinity Medium Italic
Trinity Bold
Trinity Bold Italic.

Trinity is a small family – the Helvetica family can have over 30 fonts.

Font size

The font only describes the appearance of the characters and not their height. In fact, a font can be almost any size from

very small to very large. The height of a font is measured in *points* (abbreviated to *pt*); a *point* is 1/72nd of an inch (about 0.35 mm). The font height (or *font size*) is not the height of the characters. (Clearly the character **a** has a different height to the character **A**.) Instead, each character is enclosed by an imaginary box of a constant height and this box is the height of the font size. (In this manual, we refer to this imaginary box as the *character bounding box*.)

When deciding which font size to use, remember to allow for any reduction in size when printing. Theoretically, the minimum size for characters to be readable is 1mm high (about 3pt). However, 3pt characters are tiny and 6pt is a more practical minimum to use.

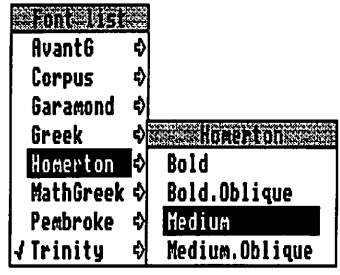
Character width

The width of a character can be either

- Constant for all characters so that **M** occupies the same width as **i**. Such fonts are called *mono-spaced* fonts; the Corpus font is an example of this.
- Variable so that **M** occupies more space that **i**. Such fonts are called *proportional* fonts and are easier to read both on the screen and when printed. Trinity is a proportional font. (This manual uses a proportional font.)

The power of the computer can be used to stretch or compress characters to make them wider or narrower. This changes the *aspect ratio* which is the ratio of the current width to the original width. (100% means the character is its original width.) The larger the ratio above 100%, the more the character has been stretched.

The Font menu



To make it easier to select a font, hierarchical menus are used. Initially you are presented with a menu of the font **families** (*AvantG*, *Corpus*, *Garamond*, etc.). Slide the mouse pointer over the arrow to the right of the family you want; this displays a submenu showing the font variants (*Bold*, *Bold oblique*, etc.).

The currently selected font is shown with a tick against its name (it is *ticked*). (In the illustration, the currently selected font is one of the Trinity family.)

To select a font, click on its variant name in the submenu. (In the illustration, *Homerton Medium* is about to be selected.)

2. Installation

This section does not apply if Equasor is supplied as part of an Impression package. Use the Impression installer to install Equasor.

You should have received:

- this manual,
- a customer registration postcard,
- a floppy disc.

The floppy disc contains these files:

- *!Equasor* – the Equasor application
- *MathGreek* – a new font containing the Greek alphabet and mathematical and other symbols
- *Equasor* – a font containing accent and brace characters
- *EFFSymbEnc* – used with PostScript printers – see later
- *Equations* – several sample equations produced by Equasor.

We recommend that you do not use this disc as your working disc. Instead, you should copy its contents and then store it in a safe place.

If you are uncertain about how to copy files, you will find full details in the *User Guide* supplied with your Archimedes.

Installing *!Equasor*

Copy *!Equasor* to either another floppy or, if you have a hard disc, a suitable directory.

Installing *MathGreek* and *Equasor*

Your Archimedes should already have a *!Fonts* file containing a basic set of outline fonts, including *Trinity Medium* and *Trinity Medium Italic*. If you do not have these fonts, they are available from Acorn Computers or any good supplier.

Because *!Fonts* is an application directory you cannot display its contents in the normal way by double-clicking on its icon. This would merely load it.

Instead, hold down the *Shift* key and then double-click on the *!Fonts* icon. This opens a conventional directory display. Copy *MathGreek* and *Equasor* into that directory.

Now double-click on the *!Fonts* icon to load it. You will see *MathGreek* and *Equasor* among the font names that are loaded.

Font cache

For Equasor to give best results you should set-up the font cache. (The font cache is the area in memory where information on the fonts currently in use is stored.)

There are two values to set-up:

FONTSIZE - which is the minimum amount of memory to reserve for the font cache, and

FONTMAX3 - which sets a limit on the size of characters to be stored in the font cache. (Large characters are only rarely used and it is wasteful of space to cache them.)

FONTSIZE

There are two possible ways to change FONTSIZE:

- using the RISC OS task manager, or
- using the command line.

If you use the task manger, you only change the size temporarily. Any change is lost when you switch off the Archimedes. To use the task manger, you:

1. Click on the task manager's icon (which is usually the right-most icon on the icon bar).
2. Choose **Task display**.
3. Scroll down until you see **Font cache** (it is in the block headed **System memory allocation**).
4. Use **Select** or **Adjust** to set the required value for the cache. The cache instantly adjusts to the new value; there is no OK button to click on.
5. When satisfied, click on the Close icon to close the task manager window.

If you use the command line, any change is permanent. To use the command line, press function key F12. Type in

```
*CONFIGURE FONTSIZE 80K
```

Press *Return* to enter the new value. Press *Return* a second time to return to the normal desktop mode. Before `*CONFIGURE` commands have effect you need to reset the Archimedes by pressing *Ctrl-Break*.

FONTMAX3

The value can only be changed via the command line. Press function key F12. Type in:

```
*CONFIGURE FONTMAX3 30
```

Press *Return* to enter the new value. Press *Return* a second time to return to the normal desktop mode.

If you have a PostScript printer

Before you can print equations on a PostScript printer, you must map in the MathGreek font. If you don't do this, the printer will substitute characters from the Courier (Corpus) font for MathGreek characters.

Appendix 3 details how to map in the font.

Registration card

Don't forget to fill out and return your Registration Card. Remember, our help desk and free update service are only available to registered customers.

3. Using Equasor

This section describes how to use the various options available to you. Examples of their use are shown in the *Tutorial* section. Only brief details are given in this section; the descriptions refer you to other sections of this manual for full details.

The various concepts, such as documents and the clipboard, are described in *Introduction*.

This manual assumes that you are familiar with using standard RISC OS applications. If you are not, you will find full details in the *User Guide* supplied with your Archimedes.

Equasor's menus

There are two menus in Equasor.

Most functions are controlled by the **Main Menu**. To display this, move the mouse pointer over an Equasor window and click **Menu**. If we say choose a menu option and don't specify which menu, we are referring to the Main Menu.

The **Icon Bar Menu** controls functions of the Equasor application rather than individual documents. To display this menu, move the mouse pointer over the Equasor icon on the icon bar and click **Menu.**

Loading Equasor

You load Equasor in the normal way for an application. That is, double-click on its icon to install it on the icon bar.

Opening a new document

Click once on the Equasor icon on the icon bar. This creates a new document and opens a conventional window onto it. The title bar shows the name of the document and the scale of the window. The default scaling is set in **Preferences** in the Icon Bar Menu; you can increase or decrease the scale of your view onto the document at any time.

The default document size is 210 mm × 297 mm (A4 paper size). If you want some other size, use the menu option **Paper limits**. (This is in the **Misc** menu.)

Also displayed is **Tools**. This is described in its own chapter.

Loading an existing document

There are two ways to load an existing Equasor document:

- Dragging its icon from a directory display and dropping it on the Equasor icon on the icon bar.
- By double-clicking on its icon. If Equasor has not already been loaded, this is done automatically.

The editing window

The Equasor editing window is a conventional RISC OS window. The Back icon, Toggle Size icon, and Adjust Size icons and the scroll bars and scroll arrows all operate as normal. (If you are unsure of the function of any of these, refer to the *User guide* for the Archimedes.)

Clicking on the Close icon can either:

- Close the window and remove the document from memory. This is how most RISC OS applications work. An Alert box warns if the document includes changes that have not been saved to disc.

  This is the default action.
- Close the window but retain the document in memory.

Remove on closing in Preferences on the Icon Bar Menu controls the Close icon action.

You can have up to eight documents loaded in memory at the same time. However, you can only make changes to one document at a time; that document is called the **open document**. To differentiate the editing window of the open document, its title bar is coloured yellow. To make another document the open document, you need only click in its window.

Starting a new equation

Position the mouse pointer over the Equasor window and click the **Menu** mouse button to display the Main Menu. Choose **Edit** then **New equation**.

The mouse pointer tracks a pair of cross-wires. Use the mouse to position the cross-wires where you want to start the equation and then click on **Select**.

The cross-wires disappear and the text cursor appears above the pointer.

You can create a second equation either by using **New equation** or by pressing *Return*. Using *Return* allows you to create a series of equations – this is described later in more detail. (See *Creating a series of equations* later in this chapter.)

Entering text

Except for certain functions in **Tools**, all text is entered at the cursor. Therefore, you may need to reposition the cursor before entering text. (See *Moving around an equation* later in this chapter.)

You can enter text from

- the keyboard,
- the tools display,
- the symbols display,
- the operators display.

The keyboard

Use the keyboard to enter alphabetic, numeric and simple arithmetic functions such as + or -.

All text entered from the keyboard is in one of the default text styles. Alphabetic characters are normally displayed in italics; other characters in an upright typeface. You can change the typeface used and the size of the characters – this is described later in *Styles*.

Tools display

The tools display is described fully in the chapter *Tools*. It allows you to:

- select functions such as divide, square root and integral
- add accents above or below characters
- insert rescalable brackets
- enter powers.

To select any of the tools click once on the appropriate icon.

You can also switch between text entry and move modes using the tools display.

Symbols display

The symbols display is described fully in the chapter *Symbols display*.

Its main use is to select characters from the *MathGreek* font. This font provides the Greek alphabet, a comprehensive set of mathematical symbols (such as ± and ÷) and a miscellany of other useful characters.

Appendix 1 shows all the characters in the MathGreek and Equasor fonts.

You can add up to six more fonts to this display. A font can have up to 255 characters, but characters 128-255 are not easily accessible from the keyboard. The symbols display provides you with a simple way to select any character in the font.

Operators display

Use this to insert operators such as **log** and **tan**. To select an operator, click once on the appropriate icon.

Unlike characters typed on the keyboard, operators are not displayed in italic but in an upright typeface (the *Operators* font). If required, this typeface can be changed using the **Styles** menu option.

You can also type a string of characters into the operators display and then insert that string into an equation. This is a quick way of inserting text in the same font as the operators.

Styles & Effects

The convention in equations is that variables are shown in *italic* and all other characters in a normal upright style. The two default type styles in Equasor (*Variables* and *Operators*) follow this convention. These are **Styles** and are controlled by the Styles dialogue box.

However, you may want to use larger or smaller characters or a different font in a part of an equation. Or you may want to emphasise one equation in a document. To do this, you overlay the area you want to change with an **Effect**. These are controlled by the Effects dialogue box.

Styles

If you change either of the default type styles and click the **OK** button in the dialogue box, all the text that uses that type

style is altered to match those changes. If you also have Effects applied, these may mask the changes.

This is a very powerful feature as it lets you experiment with the appearance of a document. If you do not like the change, you can easily restore the original values.

Any Style changes you make apply only to the currently selected document. They have no effect on any other Equasor documents that may also be loaded.

Effects

These are used to change a part of the text in a document. Once Effects are applied, you cannot modify them although you can cancel them or overlay them with other Effects.

You can only apply an Effect to a selected region of text. Therefore, to apply an Effect over an entire equation, first select it. (**Select all** is the easiest way to do this.)

To remove all the effects from an equation, you:

1. select the entire equation (use **Select all**),
2. display the Effects dialogue box,
3. click on the **Clear effects** button in the dialogue box.

Changing Styles & Effects

With both Styles and Effects you can change:

- The font. (A font is the character outlines.) The two default fonts (*Trinity Medium* and *Trinity Medium Italic*) are relatively light typefaces and sometimes a bolder typeface (such as *Trinity Bold*) may be more suitable. You can use any of the fonts in your *!Fonts* directory.
- The font size. The default font size is 18pt (a point – pt – is 1/72 of an inch) which may be too large if printed full size but is ideal if printed reduced in size.
- Aspect ratio. Changing this makes the characters wider (greater than 100%) or narrower (less than 100%).

The equations in this manual are shown reduced to approximately 10pt.

Scaling the window

When you have entered some text you may find that you want to enlarge your view of it. To do this, change the scaling of the window; choose **Scale view** on the Main Menu to display a dialogue box. Scalings larger than 100% enlarge the

image; smaller than 100% reduce the image.

This only changes the size of the image on the screen. The size of the characters in the equation does not change. If you want to change the character size, use the **Styles** menu option.

Moving around an equation

You can either

- use the arrow keys on the keyboard (←↑↓→), or
- move the mouse pointer to a new position and click on **Select**.

You can use the arrow keys only to move around within an equation and not between equations. The mouse pointer can be used for both.

Selecting text

Before you can move or copy a section of text or apply certain functions (such as square root), the relevant region of text must be selected. Selected text is always shown *highlighted* (that is, light characters on a dark background).

Selecting a single character

If you position the mouse pointer over a character and press and hold down **Select**, after about a second the character is selected.

As described in the *Introduction* chapter, each character is enclosed within an imaginary box. You just need to position the mouse pointer within this box; it does not have to be exactly over the character.

You can also select the character to the left of the cursor by typing *Ctrl-B*

Selecting an expression

Expressions are groups of characters entered in a consistent fashion. For example, this equation

$$a + b = c + \frac{d}{e} + f + gg^{2.5} + \int_{3.5}^{4.5} h + i$$

has eleven expressions:

- $a + b = c +$
- d
- e

- $+f+g$
- g
- 2.5
- +
- the integral sign
- 3.5
- 4.5
- $h+i$

To select an expression, position the mouse pointer anywhere within it and double-click on **Select**.

Variable length selects

There are three of these:

- Position the cursor at the start of the region. Move the mouse pointer to the end of the region and then click on **Adjust**.
- Position the mouse pointer to the start of the region. Press and hold down **Select** and drag the mouse pointer to the end of the region. As you move the mouse pointer, you will see the outline of a rectangular box appear. When the box encloses all the text that you want to select, release the **Select** mouse button. The box disappears and the text is shown highlighted.
- This method works from the existing cursor position. (The cursor must have been in position for at least a second.) Position the mouse pointer over the cursor. Press and hold down **Select** and drag the mouse pointer to the end of the region. As you move the mouse pointer, you will see the text becomes highlighted. When the mouse pointer is at the end of the region, release **Select**.

Deleting text

You can delete individual characters by positioning the cursor immediately after them and then pressing *Delete*.

You can delete a larger region of text by first selecting it and then from the Main Menu choosing:

- **Cut**, or
- **Delete**.

Cut removes the text and puts it on the clipboard. This allows you to either insert it in a new position or, if you made a mistake, replace it in its original position. If the text is not

required, it can be left on the clipboard. It remains there until something else is placed on the clipboard.

Delete removes the text and discards it. No copy is kept and you cannot undo a delete. For this reason, we recommend that you normally use **Cut** to remove unwanted text. Delete is useful if you already have something on the clipboard that you want to keep.

Moving text and equations

To move text use cut and paste. To move an entire equation you can either cut and paste or drag the equation around on the document.

Cut and paste

Cut and paste lets you move text around on a document or between documents.

Before you can use cut and paste (or copy and paste), you must first select the required region of text. The easiest way to select an entire equation is to use the menu option **Select all.**

Cut removes the selected text to the clipboard; **Copy** leaves the text untouched in the equation and just puts a copy on the clipboard.

Position the cursor to where you want to make the insert. (If necessary, create a new, empty equation.) From the Main Menu choose **Edit** and then **Paste.** This copies the contents of the clipboard into the document at the cursor position.

Dragging an equation

Click on the hand symbol in **Tools.** The mouse pointer changes to a hand. Move the hand over the required equation and press and hold down **Select.** Equasor draws an outline box around the equation to show that you can move it.

While you keep **Select** pressed you can drag the outline box around the document. When moving the box, you do not have to avoid other equations but can slide over them without changing them. When you have positioned the box to its new location, release **Select.**

The mouse pointer remains hand-shaped until you either click on the arrow symbol in **Tools** or choose **New equation** from the Main Menu. This lets you make a series of moves.

Creating a series of equations

Often several equations are required to line up, like this:

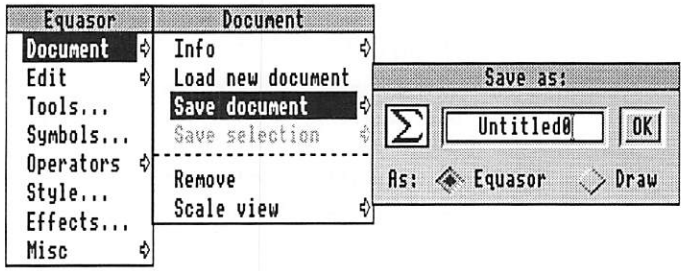
$$a = b^2 + \sqrt{c}$$
$$= 2^2 + \sqrt{9}$$
$$= 4 + 3 \quad = 7$$

Equasor provides a simple way of doing this by using the *Return* key. There are three options (set in **Preferences** in the Icon Bar Menu):

- create a new equation and align the cursor with the = in the old equation ($a=b^2$... in the example above), or
- create a new equation and align the cursor with the left-most character in the old equation (*a* in the example), or
- create a new equation and align the cursor with the right-most character of the old equation (c in the example).

The equations remain independent and so, if you edit one of them, it may go out of alignment with the others.

Saving



Experience shows that you can never save files too often. This applies to all files and not just Equasor's. Try to get into the habit of making regular saves and back-ups. If you are going to make any major changes, always save the document before you start in case you make a serious mistake. You should also routinely save back-up files on separate floppy discs.

You can save either:

- the entire document, or
- only the selected region or equation.

Full details of saving can be found in the **Main Menu** section under **Save document** and **Save selection.**

In-memory transfers of both entire documents and selected regions are supported. (That is, you can drag the Save icon from Equasor and drop it directly onto another application. This avoids having to go through the intermediate step of saving to disc.)

Equasor and Impression

Equasor files can be easily imported into Impression and Impression Junior.

Impression issue 2.05 (or later) and Impression Junior issue 1.05 (or later) accept files in either Equasor or Draw format. Equasor format is best because it lets you transfer equations back into Equasor if more editing is needed.

Earlier versions of the Impression software can only accept Equasor files in the Draw format. You can get a free upgrade if you return disc 1 from Impression or Impression Junior to Computer Concepts.

In-memory transfers are the easiest way to transfer files to and from Impression. That is, you drag the Save icon from Equasor and drop it onto either a graphic frame or a null (empty) frame in Impression.

This assumes that you have sufficient room in memory for both the Equasor and Impression applications and the document. If you do not, then:

1. save the Equasor file to disc,
2. quit Equasor to release memory,
3. load Impression and the required document,
4. drag the file icon from the directory window onto a graphic or null frame in the document.

In Impression, equations can be inserted into the body of the text using embedded frames. (Impression Junior does not have embedded frames.) Unlike local frames, embedded frames always keep their position within a block of text, regardless of any edits you may make. To insert an embedded frame into some text, you:

1. create a local frame of the required size (although you can later resize embedded frames if necessary),
2. cut that frame to the clipboard,

3. position the cursor where you want to insert the embedded frame,
4. insert the embedded frame using the menu option **Embed frame** (which is in the **Frame** menu).

In Impression Junior use local frames to hold equations produced by Equasor.

Use Impression's **Alter graphics** dialogue to rescale equations within a frame, if necessary. This dialogue box can be displayed very easily by double-clicking on a graphics frame.

4. Tutorial

This brief tutorial shows you how to use the main facilities of Equasor. Often only one of several similar facilities is described; we tell you which other facilities a description applies to. The equation that this tutorial builds is:

$$\sum_{a}^{b} \frac{c}{\sqrt{d+e+f}+g^{\frac{1}{2}}} = \overleftarrow{h} - \underrightarrow{i}(\log\theta)JK$$

It is probably mathematical gibberish but it does illustrate how to use Equasor.

¶ *In this tutorial, paragraphs like this give you additional information on using Equasor.*

Loading Equasor

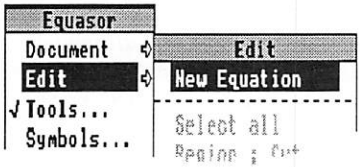
Display the *!Fonts* icon in a directory window. You do not need to load *!Fonts* – Equasor reads it when required. If *!Fonts* is on a floppy disc, you may be prompted later to swop discs.

Display the *!Equasor* icon in a directory window. Double-click on its icon to load it onto the icon bar. (Double-click means press and release the mouse button twice in quick succession.)

Click on the Equasor icon on the icon bar. This opens a new Equasor window with the name *Untitled0*.

Starting a new equation

Position the mouse pointer over the Equasor window. Click on the **Menu** (centre) mouse button to display the Main Menu.



On the menu, choose **Edit** then **New equation**. The mouse pointer now tracks a pair of crosswires. Position these slightly left of centre in the window and then click **Select** (the left-hand mouse button). The crosswires disappear and are replaced by the normal text cursor.

Picking a function

Move the mouse pointer over the Tools window and position it over the summation symbol (Σ). Click on **Select** and Σ is inserted into the equation at the cursor.

The cursor moves to below Σ, ready for you to type in a limit. Type *a* on the keyboard and *a* is inserted into the equation. (There may be a few seconds delay whilst the fonts are loaded from disc.)

Now move the cursor above Σ by pressing the → key on the keyboard.

Type *b* to insert the second limit into the equation.

¶ *This is how you insert the Product, Integral, and Ointegral symbols and their limits.*

¶ *You can also move between the limits using the ↑ and ↓keys. These keys move the cursor to the start of the limit.*

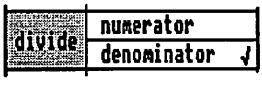
Building the division

The cursor is currently to the right of the *b*. If you typed in more characters, they would appear next to the *b* which is not what this equation requires. So, press → again to move the cursor to the right of the Σ. Now type *c*.

We now need to select *c* so that we can apply the division function. Move the mouse pointer over the *c* and press and hold down **Select** (the left-hand mouse button). In about a second, *c* is highlighted (displayed as a white character on a black background) to show that it is selected.

Move the mouse pointer over the Tools window and click on the divide icon.

c is deselected (it changes to a black character on a white background) and a dividing line is drawn under it. The cursor moves to the denominator position below the line. Notice that the Σ symbol automatically increases in size.



¶ *The dividing line can also be drawn above the existing text and the cursor moved to the numerator position. This is controlled by the* Divide *switch towards the bottom of the Tools window.*

¶ *You also apply the Square Root, RootN, and Powers by first selecting text and then applying the function. This tutorial uses Square Root and Powers later on.*

Type in *d*+. Notice in the equation that the + is immediately to the right of the *d*.

Type in *e*. Notice that

- the dividing line is automatically extended to cover the whole of *d* + *e*, and
- there is now a space between *d* and +.

¶ *The spaces either side of the* + *are defined by* Spacing *in the Styles dialogue box. You can make the spacings larger or smaller by changing the value of* Spacing.

Applying the Square Root

Move the mouse pointer anywhere over the expression *d+e* and double-click on **Select**. This selects *d+e*.

Click on the Square Root symbol in the Tools window and it is applied to *d+e*.

The cursor has disappeared. Position the mouse pointer to the immediate right of *e* and click once on **Select**. The cursor reappears. If necessary, reposition the mouse pointer and try again. Do not use the ← and → keys; the reason for this will be explained shortly.

¶ *You can position the mouse pointer anywhere on the* e *from its centre line to its immediate right. If you want to place the cursor between two characters, the mouse pointer can be positioned anywhere between their two centre lines.*

Now type *+f*. Notice that the horizontal bar of the square root symbol is continued over both characters. If you typed in more characters, the horizontal bar would continue.

We do not want the *+g* covered by the square root so we must leave the function. Notice that, at present, the cursor is the same height as the horizontal bar. This tells you that it is still within the square root function.

Press the → key once. The cursor does not move but it becomes smaller (the same height as the text). This tells you that you are now outside the square root function.

¶ *If you were to press ← again, the cursor would increase in size to show you that it was back inside the square root function.*

Applying the power

Type *+g*.

You must select the *g* before you can apply the power to it. You could position the mouse pointer over it and hold down

Select as you did to select *c*. Instead, use an alternative method:

- Position the mouse pointer below and to the left of *g*.
- Press and hold down **Select**.
- Keep **Select** pressed and drag the mouse pointer up and to the right. As you move the mouse, you will see an outline box appear.
- When the box encloses *g*, release **Select**.

This selects *g*. This method can be used to select any length of text (even the entire equation if necessary).

¶ *You can move the mouse diagonally in any direction for this select method.*

Click on the power symbol in the Tools window. *g* is deselected and the cursor moves to the superscript position.

¶ *To move to the subscript position, press* ←.

¶ *If you want the cursor to move first to the subscript position, use the* Power *switch towards the bottom of the Tools window.*

Type *1*.

Select the *1* and then click on the divide symbol in the Tools window.

Type *2* to complete the power.

Applying an effect

The ½ would look better in smaller characters. We can apply an effect to over-ride the automatic scaling of these characters.

Select the ½; use the same method as you used to apply the power.

Move the mouse pointer over the Equasor window and click on **Menu**. This displays the Main Menu.

Click on **Effects** to display the effects dialogue box.

If the switch to the left of **Point size** is **off**, click on the switch to set it **on**. (If the switch is **off**, it appears to be raised from the dialogue box. If **on**, it appears recessed and has a small red square in its centre.)

The editable field to the right of **Point size** will show the default point size. Click in the box and change it to **10**.

Click on the OK button to change the character size.

Adding the = sign

Position the cursor next to the *2*.

We now have to leave the denominator position. Press the → key until the cursor moves to the centre line of the equation.

Type =

Adding accents

Type *h* and select it. Click on any of the accent symbols in the Tools window to insert that accent over the *h*.

Position the cursor after the *h*.

Type *-i*

Again, notice that initially the minus sign is to the immediate right of *h* and is then spaced out when *i* is typed.

We want to place the accent under the *i* so click on **below** in the Accents switch on the Tools display. The tick is removed from **above** and appears against **below** to show that it is now the selected option.

Select the *i* and apply any of the accents to it.

Position the cursor after the *i*.

¶ *If you want to, you can apply accents both above and below a character. You can also stack several accents above and below each other.*

Selecting an operator

Move the mouse pointer over the Equasor window and click on **Menu**. This displays the Main Menu.

Slide the mouse pointer over the arrow to the right of **Operators** to display the list of operators. To select any of the operators in this list, move the mouse pointer over it and click **Select**.

The operator is then inserted into the equation at the current cursor position. Notice that an upright text style is used; this is the *Operators* text style. If you want to use a different text style, use the Style dialogue box.

Inserting a character from the MathGreek font

Again display the Main Menu by clicking **Menu** over the Equasor window.

Click on the menu option **Symbols**. This opens a window displaying the characters in the MathGreek font. Notice that to reduce the size of the window, only part of the character set is displayed. To see the other characters, you can either scroll or resize the window. Notice also that a tick appears against the **Symbols** menu option name to show that the window is open.

To insert any of the characters into the equation at the cursor position, just click on that character in the Symbols window. In the sample equation we used θ but any symbol can be used.

Applying the brackets

Before you can apply the enclosing brackets, you must first select the region of text to be enclosed. You could use the box method already described, but we will use another method to show its use.

Position the mouse pointer over the cursor (which should be to the right of θ).

Press and hold down **Select**.

Keeping **Select** held down, move the mouse pointer to the left. As you move the mouse pointer, you will see the text becomes highlighted.

When you have the required area of text selected, release **Select**.

Click on any of the brackets symbols in the Tools display and they are placed either side of the selected text. Notice that the text is deselected by this action.

¶ *You can also select text by moving the mouse pointer from left to right. We used right to left only because of the starting position of the cursor.*

¶ *You could also have inserted the brackets into the equation and then inserted* logθ *inside them. You can use either method.*

Adding a new font to the Symbols display

Move the mouse pointer over the Symbols display and click **Menu**. This displays a small menu:

Slide the mouse pointer over the arrow to the right of **Insert new font** to display a menu of available fonts.

Choose any of the text fonts (that is, not a symbols font like *Greek*) except *Trinity Medium* or *Trinity Medium Italic* (because these are already used in the equation).

This adds that font to the Symbols display as a new font.

Selecting characters from the new font

Click twice on **Next** in the Symbols display window to display the new font in the window.

¶ *You could also have directly selected a font from the small symbols display menu by sliding the mouse pointer over* ***Show font****. This displays a menu of the fonts currently loaded. Choose a font from this menu in the conventional way by clicking on its name.*

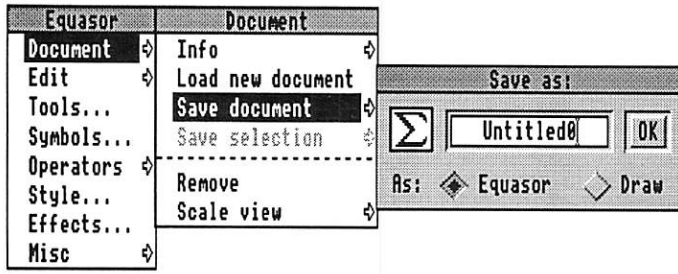
Click on a couple of characters in this second font to insert them into the equation. (We used *JK* but any characters can be used.)

Saving the document

Documents can be saved either to a suitable directory on a hard disc (if you have one) or to a floppy disc. Whichever you use for storing the equation, you must open the normal RISC OS directory window on it. If you are unsure about saving files to directories, refer to the Archimedes' *User Guide* for more information.

Click **Menu** over the Equasor window to display Main Menu.

Slide the mouse pointer over **Document** and then over **Save document**. This displays a small dialogue box.



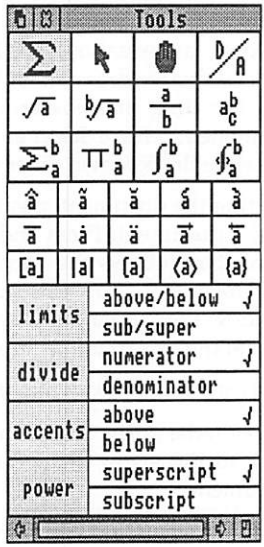
Change the name in the editable field from *Untitled0* to a name of your choice. (To clear the complete name in the editable field, type *Ctrl-U* or hold down the *Delete* key.)

To save the document, drag the document icon from the dialogue box and drop it on the RISC OS directory window.

The two save formats are described in detail in the **Main Menu** section under **Save document**.

¶ *You only need to drag the icon the first time the file is saved or if you want to save the document to another directory. To resave the document to the same directory, just click on the* ***OK*** *button in the dialogue box.*

5. Tools



This window is displayed when you open a document. If you want to remove it from screen, click on the Close Icon. Click on **Tools** to restore it on screen. You can also drag almost the entire window off the sides or bottom of the screen.

When the window is first opened, only the top half of the tools are shown. To display the switches (**limits**, **divide**, **accents**, and **power**), increase the size of the window by either

- using the **Adjust size** icon (at the bottom right of the window), or
- clicking on the Σ symbol (at the top-left of the window). Use the Σ symbol to toggle the window between half size and full size.

All the functions, brackets and accents can be selected either by clicking on their icon or by using single key short-cuts from the keyboard. The functions have default short-cuts allocated; the brackets and accents do not. You can change this default set-up using the Main Menu. Where a default control short-cut exists, this is shown in the descriptions as, for example, *Ctrl-Q*. This means hold down the *Ctrl* key and type either *Q* or *q*.

Click on the hand symbol when you want to drag the document around in the window or an equation around on the document.

To drag an equation, position the hand over it and press **Select**. Equasor draws an outline box around the equation and you can drag that box around the window. When correctly positioned, release **Select** and the outline box disappears. You can slide the box over other equations.

To drag the document, position the hand over an unused part of the document. Press and hold down **Select** and the document then follows the hand. Release **Select** to stop dragging the document. You can position the document within the window more accurately by dragging than by using the slide bars at the side of the window.

You cannot edit text while the hand is displayed.

Click on the arrow symbol after dragging. The cursor changes back to the arrow shape and you can continue editing the document.

Design/Apply. This is described in detail at the end of this chapter.

The four symbols on the second row can only be applied to a selected region of text. Selecting text is described in *Using Equasor*.

square root. Keyboard short-cut: *Ctrl-Q*. The horizontal bar is applied over the whole of the selected region.

nth root. Keyboard short-cut: *Ctrl-N*. The cursor moves to the position **b** next to the root symbol.

divide. Keyboard short-cut: *Ctrl-D*. The default is that the selected region of text becomes the numerator and the dividing line is inserted below the selected region. This order can be reversed and the selected region become the denominator; use the **divide** switch (described later).

power. Keyboard short-cut: *Ctrl-P*. The **power** switch (described later) selects whether the cursor then moves to the **b** or the **c** character position. The default is the **b** position. (**b** and **c** can be text of any length and complexity.) To move to the other position use the ← key.

Text in the **b** and **c** positions is scaled to 75% of the height of the text at **a** (the current font size).

The next four symbols are inserted at the cursor and do not require a selected region of text. The cursor is moved to the position shown as **a**. Text in the **a** and **b** positions is scaled to 75% of the current font size.

The **limits** switch (described later) selects whether text in the **a** and **b** positions is (i) above and below the symbol, or (ii) in the superscript and subscript positions. (**a** and **b** can be text of any length and complexity.)

$\sum_a^b$ **Summation.** Keyboard short-cut: *Ctrl-S*

$\prod_a^b$ **Product.** Keyboard short-cut: *Ctrl-F*

$\int_a^b$ **Integral.** Keyboard short-cut: *Ctrl-I*

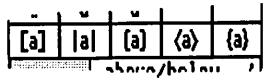
$\oint_a^b$ **Ointegral.** Keyboard short-cut: *Ctrl-O*

The next two lines contain different accent characters.

These accents are applied to a selected region of text. They can be inserted either above or below the character depending on the setting of the **options** switch (described later). If required, you can stack several accents above each other.

You can allocate keyboard short-cuts to any of the accents; there are no default short-cuts set.

The next line contains various shapes of brackets.



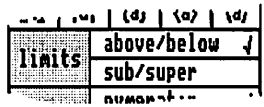
You can either:

- insert brackets at the cursor and then enter text inside them, or
- insert brackets around a selected region of text.

If the text inside brackets subsequently expands or contracts vertically, the brackets expand or contract to match.

You can allocate keyboard short-cuts to select any of the brackets; there are no default short-cuts set.

Limits switch



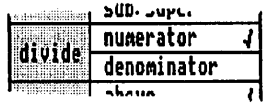
This applies to the characters shown in the **a** and **b** positions for

summation
product
integral
Ointegral.

Above/below – **a** and **b** are immediately above or below the symbol.

Sub/super – **a** and **b** are subscript or superscript characters

Divide switch

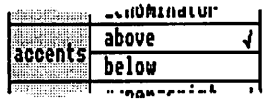


This sets the action of clicking on the **divide** icon.

Numerator – the division line is placed below the selected text and the new cursor position is below the division line.

Denominator – the division line is placed above the selected text and the new cursor position is above the division line.

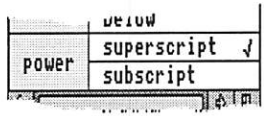
Accents switch



Above – accents are placed above characters.

Below – accents are placed below characters.

Power switch



You can place powers both above and below the preceding character but normally you only want them in one position. This switch selects which position the cursor moves to after clicking on the **power** icon. To move to the other position use the ← key to step backwards.

Superscript – the cursor moves to the superscript position.

Subscript – the cursor moves to the subscript position.

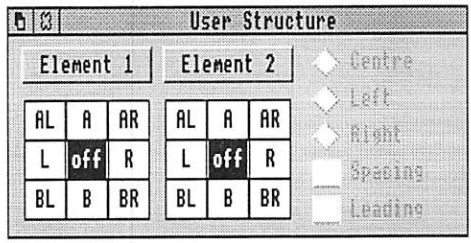
Design/Apply

This allows you to design a basic data structure which can then be used several times in the document or in different documents. There is an example of its use at the end of this description.

It provides an easy way to add formatted text to existing expressions. Text inserted using D/A is not scaled to 75% as would text applied using the **power** tool.

The Design (D) option

To display the Design dialogue box click on the **D** of the **D/A** icon. (If you have just started up Equasor and not yet begun an equation, clicking on this icon has no effect. Start an equation and try again.)



Click on the Close icon to remove the dialogue box from the screen. The current parameter settings are remembered and can still be Applied.

Element 1

The setting in this box determines where the cursor moves to when you click on the **A** (apply) character of the **D/A** tool. The six switches surrounding the **off** switch are 'compass points' (AL - above left, A - above, AR - above right, and so on). Only one of the seven switches can be selected at any time, so clicking on a new switch cancels the previous setting.

If the **off** switch is selected, this box is ignored and the cursor moves to the position set in **Element 2**.

Element 2

Operation of this box is similar to Element 1.

If the **off** switch is selected, this box is ignored and the cursor moves to the right of the data structure. If **off** is selected in both boxes, clicking on Apply has no effect.

Centre
Left
Right

These three radio switches are greyed unless one of the **above** (A) switches or **below** (B) switches is selected in either Element 1 or Element 2. As these are radio switches, only one of the three switches can be selected at any time.

These switches determine the alignment of the text inserted above or below the existing text. Their effect is shown below:

centre
existing - text

left
existing - text

right
existing - text

Spacing

This switch is greyed unless one of the three **left** (AL, L, BL) switches or one of the three **right** (AR, R, BR) switches is selected in either Element 1 or Element 2.

If the switch is **off**, there is no extra horizontal offset from the existing text.

If the switch is **on**, text is offset by the **spacing** value set in **Style**. Note that with spacing set to its default value, text is only slightly offset if this switch is on.

text^{added} Spacing switch not set

text ^{added} Spacing switch set

Leading

Operation of this switch is similar to the **Spacing** switch just described. It is greyed unless one of the three **above** (AL, A, AR) switches or one of the three **below** (BL, B, BR) switches is selected in either Element 1 or Element 2.

If the switch if **off**, there is no extra vertical offset from the existing text.

If the switch is **on**, text is offset by the **leading** value set in **Style**.

text^{applied} **Leading switch off**

text^{applied} **Leading switch on**

The Apply (A) option

Clicking on the **A** of the **D/A** icon only has an effect if there is a selected region of text. Selecting text is described in *Using Equasor*.

Clicking on **A** applies the structure you created in the Design dialogue box to the selected region. (It also deselects the region of text.) The cursor moves first to the position you specified for Element 1. Enter the required text for this position and then press the → key. This moves the cursor to the position you specified for Element 2. Enter the required text for this position and again press the → key. This moves the cursor outside of the structure.

If **off** is selected for either Element 1 or Element 2, the cursor ignores that element. If **off** is selected for both elements, no action takes place and the region of text is not deselected.

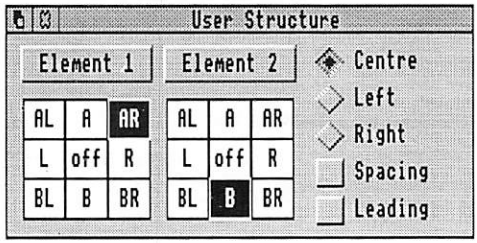
Using Design/Apply

This is a very powerful and flexible feature of Equasor, but its flexibility makes it complicated. This illustration of its use may help you to understand its application.

existing-text is the region of text that was selected
E1 is the text entered at the Element 1 position
E2 is the text entered at the Element 2 position
Q3 is text entered after pressing → for the second time.

Spacing and **Leading** were not used.

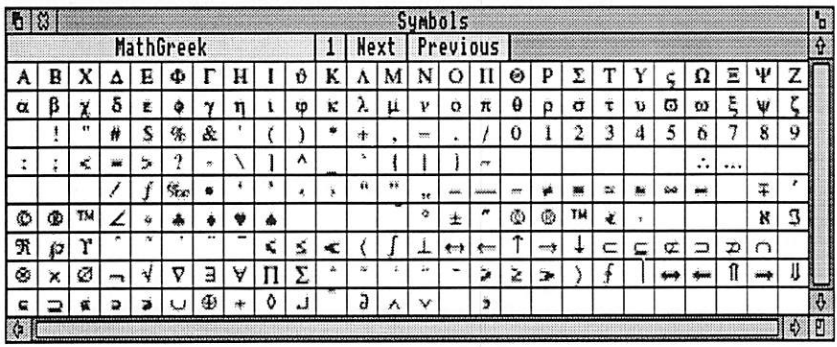
The dialogue box was set up thus:



which gives this effect:

$$existing\text{-}text\overset{E1}{\underset{E2}{}}Q3$$

6. Symbols display



Use the Main Menu option **Symbols** to bring up the symbols display window. It allows you to directly select characters from a particular font, primarily *MathGreek*. There can be up to eight fonts loaded in the Symbols display.

Note that when you first open the window, it only shows part of the available character set. This minimises the area of the screen that it obscures. (For details of resizing RISC OS windows, refer to the Archimedes' *User Guide*). Like the other windows in Equasor, you can drag most of the Symbols display window off the sides and bottom of the screen. Click on the Close icon to remove the window from the screen.

When you start-up Equasor, only the *MathGreek* and *Equasor* fonts are loaded in the Symbols display. Use the Symbols display menu (described later) to add more fonts.

To change the font displayed in the window either:

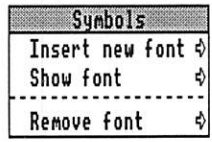
- use the **Show font** menu option (described later), or
- click on the **Next** and **Previous** boxes to move forwards and backwards through the fonts.

The number to the left of **Next** shows which of the eight fonts is displayed in the window.

Click on a character in the window to insert it into an equation at the cursor position.

Font display menu

To display this menu, position the mouse pointer over the window and click **Menu**. This displays a small menu:

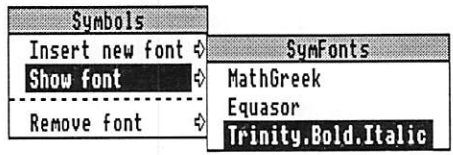


Insert new font

Slide the mouse pointer over the arrow to the right to display a menu of the available fonts. Click on the name of the font you want to add to the Symbols display.

If you try to load more than eight fonts, an alert box appears to warn you that only eight fonts are allowed.

Show font



Slide the mouse pointer over the arrow to the right to display a menu of the currently loaded fonts. To display a font in the window, click on its name.

This is an alternative to clicking on the **Next/Previous** boxes on the window to change the font displayed in the window.

Remove font

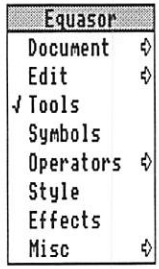
The operation of this option is similar to **Show font**.

Slide the mouse pointer over the arrow to the right to display a menu of the currently loaded fonts. To remove a font, click on its name.

You can only remove fonts 3 to 8 (those loaded using **Insert new font**). Fonts 1 & 2 (*MathGreek* & *Equasor*) cannot be removed.

7. Main Menu

To display the Main Menu, move the mouse pointer over the main Equasor window and click on **Menu**.



Some of the menu items have a small arrow to their right. Slide the mouse pointer over this arrow to display a further submenu. The other options are selected simply by clicking on their name. This is the standard way of choosing from Archimedes' menus.

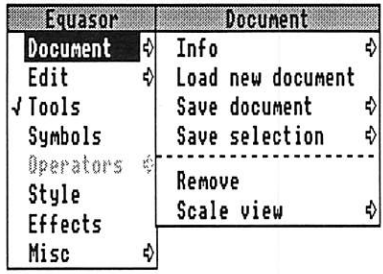
Menu items are *greyed* (shown in light grey) if they are not available. For example, until you create an equation you cannot save it. So, in the Document submenu, the **Save document** option is initially greyed and only becomes available when you start creating an equation.

A tick may be shown to the left of certain options (they may be *ticked*). This shows that these windows or dialogue boxes are already displayed on the screen (although they may be hidden behind other windows or largely slid off the sides or bottom of the screen). If the window or dialogue box is hidden behind other windows, you can bring it to the front by clicking on the option name.

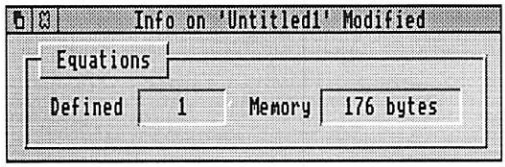
If the option is not ticked, click on its name to display it. To close a window, click on its Close icon; to close a dialogue box, click on either **OK** or **Cancel**.

You can also choose most of the menu options from the keyboard. Where this applies, it is shown in the description for that option. (Appendix 2 contains a complete list of keyboard short-cuts.)

Document



Info



Keyboard short-cut: *Ctrl-F1*

A small information box tells you:

- the number of separate equations on this document, and
- the amount of memory used by those equations.

The title bar tells you if the document is unchanged since the last save (**unmodified**) or if the document has unsaved changes (**modified**).

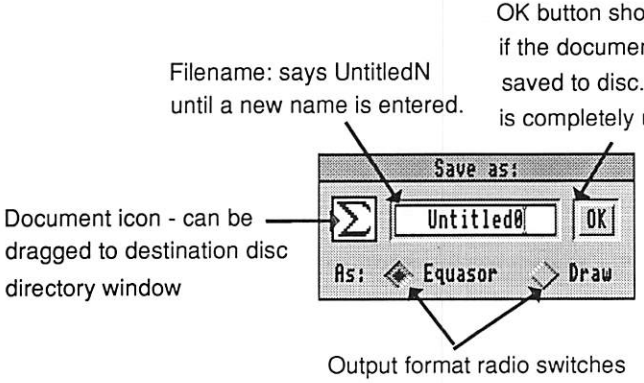
Load new document

An alert box tells you how to load an Equasor document from disc. A document can be loaded by:

- double-clicking on its icon, or
- dropping its icon onto an Equasor window.

Loading existing documents is described in more detail in *Using Equasor*.

Save document



Keyboard short-cut: *Ctrl-F3*

This option is greyed if the document has no equations on it.

Sliding the mouse pointer over the arrow to the right of this option displays the small dialogue box shown above.

If you are saving a document for the first time or saving to a different directory, you

1 make any changes required to the file name in the editable field, and then

2 drop the document icon onto the required directory window.

If you do not change the name in the editable field, a new Equasor document is saved with the default name of *UntitledN* where *N* is a sequence number.

To resave a file, click on the **OK** box or press *Return*.

There are two formats in which you can save a document:

- as an Equasor file – files in this format can be loaded into Impression or reloaded into Equasor for further editing, or

- as a Draw file – files in this format can be loaded into other applications but cannot be reloaded into Equasor.

Files saved in the Equasor format use a full implementation of Acorn's Draw specification. However, most applications can only recognise files in the partial implementation used in the *!Draw* application. Hence, two save formats are provided.

Save selection

This option is greyed unless there is a selected region.

Operation is similar to **Save document** for both initial saves and resaves.

Remove

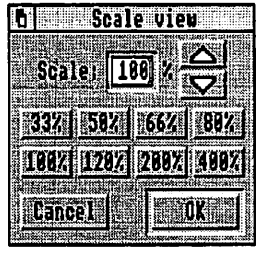
This removes a document from memory.

If you have made changes and not saved them, an alert box appears to warn you.

Click on **Remove** to remove the document.

Click on **Cancel** or press *Esc* to return to the Equasor window.

Scale view



Keyboard short-cut: *Ctrl-F9*

This allows you to zoom in or out on your view of the document. The default size can be changed in **Preferences** in the Icon Bar Menu. Smaller scalings give a reduced image; greater scalings give an enlarged image. The range is 1% to 999%.

To change the scale you can

- type a new value into the editable field, or
- use the bump icons (to the right of the editable field) to change the scaling in steps of 1%, or
- choose one of the predefined values, or
- use *Shift-F1* to *Shift-F10* to select scalings between 10% (*Shift-F1*) to 100% (*Shift-F10*) with the other keys giving the intermediate 10% steps, or
- use *Shift-F11* to halve the current scaling, or
- use *Shift-F12* to double the current scaling.

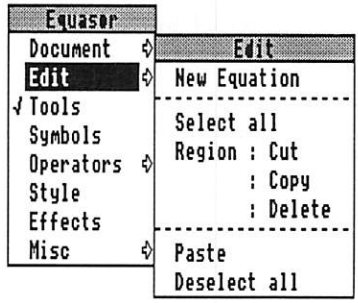
After selecting a new value, either click on **OK** or press *Return* to implement it.

To quit without changing the scaling either

- click on **Cancel**, or
- press *Esc*.

Note that you only change your view on the document. The size of the text in the document itself does not change.

Edit



New equation

Keyboard short-cut: *Ctrl-A*

Use this option to start a new equation.

The mouse pointer tracks a pair of cross-wires. Use the mouse to move these to where you want to start your new equation and then click **Select**. The cross-wires disappear and the cursor appears above the mouse pointer. You can now start building the equation.

Select all

Keyboard short-cut: *Ctrl-T*

This option is greyed until you start building an equation. It is also greyed when there is a selected region.

Choose this to select the entire current equation. (The *current equation* is the equation that contains the cursor or a selected region.)

Region: Cut

Keyboard short-cut: *Ctrl-X*

This option is greyed unless there is a selected region.

This removes (cuts) the selected region from the equation and puts it on the clipboard. You can then paste that region into another part of your document or another Equasor document.

Any existing contents of the clipboard are over-written and are lost.

: Copy

Keyboard short-cut: *Ctrl-C*

This option is greyed unless there is a selected region.

This copies the selected region to the clipboard. The selected region remains in the equation and is unchanged. You can then paste that copy into another part of your document or another Equasor document.

Any existing contents of the clipboard are over-written and are lost.

: Delete

Keyboard short-cut: *Ctrl-K*

This option is greyed unless there is a selected region.

This deletes the selected region. Use this option with care as no copy is kept of the deleted text and you cannot undo this operation. It is generally preferable to use **Cut** to remove unwanted regions.

Paste

Keyboard short-cut: *Insert* or *Ctrl-V*

This option is greyed if the clipboard is empty.

Text held on the clipboard is pasted into the equation at the current cursor position. The cursor is then repositioned at the end of the inserted text.

The clipboard contents are not destroyed by this operation and can be pasted again if required. This is useful if you want to duplicate parts of an equation.

Deselect all

Keyboard short-cut: *Ctrl-Z*

This option is greyed unless there is a selected region.

Choosing this option deselects the selected region. The text of the equation is unchanged.

Tools

Keyboard short-cut: *Ctrl-F4*

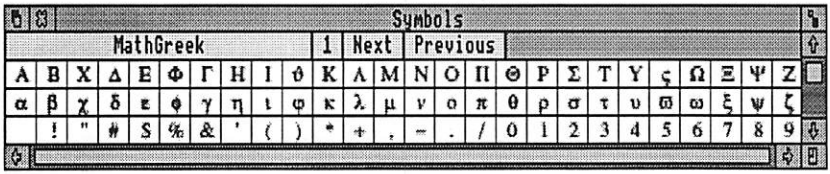
When you open the Equasor window the Tools are displayed. (The Tools are described in a separate chapter.)

If the Tools window is already open, a tick is shown against its option name. To close the Tools window, click on its Close icon; this removes the tick against the option name.

You can also click on the Back icon to put the Tools window behind other windows. (You might choose to hide it if you enlarge an equation to examine it in detail and you require all the screen.) Click on the option name to make Tools the front window.

If this option name is not ticked, click on the name to open the Tools window. A tick then appears against the option name.

Symbols



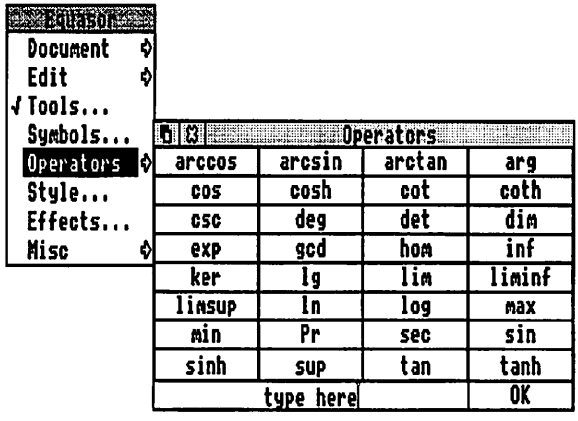
Keyboard short-cut: *Ctrl-F5*

Click on this to display the Symbols window (this is described in a separate chapter). This provides a quick way to select characters from a font. (Appendix 1 shows all the available characters in the MathGreek and Equasor fonts.)

Note that when you open the window it shows only half the available character set. This minimises the area of the screen covered by the symbols' window. Scroll down or increase the size of the window to see the other symbols.

To insert a character, first position the cursor in the text and then click on the required character. It is inserted into the equation at the cursor and the cursor moves one place right.

Operators



This option is greyed if either:

- there is a selected region,
- there is no cursor displayed in this document.

Position the cursor before clicking on this option.

Move the mouse pointer off the Operators window to remove the window from the screen

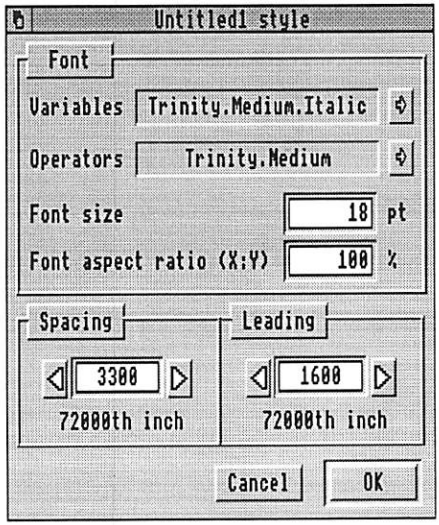
Click on the required operator name to insert that operator into the equation at the cursor. The cursor is repositioned to the right of the operator name.

At the bottom of the display is an editable field. If you type into this field (up to 12 characters) and then click on **OK**, the contents of the field are copied into the equation at the cursor. (In the illustration above, this field contains *type here*.)

Note that text from this display appears in the *Operators* type style (normally 18pt Trinity Medium). If you were to type the same text directly from the keyboard, it would appear in the *Variables* type style (normally 18pt Trinity Medium Italic).

The *Operators* type style can be changed using the **Style** menu option.

Style



Keyboard short-cut: *Ctrl-F6*

Use this option to set the type styles for your equations.

Any changes made using this dialogue box apply to all the text in the current document. To change only part of the text in the document, use the *Effects* option.

Using dialogue boxes is described in the *Introduction* chapter of this manual.

OK

Pressing *Return* has the same effect as clicking on this button.

Click on this button to implement any changes you have made in this dialogue box.

Cancel

Click on this button to cancel any changes that have not yet been incorporated into the document. (Changes are only incorporated into the document when you click on **OK**.)

Font

Fonts and font sizes are described in the *Introduction* chapter

of this manual.

Variables

Variables are characters you insert directly from the keyboard or select from tools or from the Symbols display.

To change the font, click on the arrow to the right of the editable field to display a menu of the available fonts.

Click on the name of a font to select it.

Operators

Operators are

- unary (monadic) arithmetic functions (such as *arccos*, *log*, *tan*) selected using the menu option **Operators**, or
- binary operators (such as +, -, ×, /) selected from any source.

Font size

Type in the required font size (height).

Font aspect ratio

This determines the ratio between the width and the height of the characters. 100% is the ratio intended by the font designer. Use ratios less than 100% for narrower characters, more than 100% for wider characters.

Spacing

This is the horizontal separation automatically inserted around operators such as + and functions such as **square root**. This option does not control the space inserted when you press *Space* on the keyboard; that is controlled by **Preferences** in the Icon Bar Menu.

Spacing is defined in steps of 1/72,000th of an inch (1/1,000th of a point; approximately, 0.00035 mm). To change the value, either:

- enter a new value into the editable field, or
- click on the bump icons either side of the editable field to change the value in steps of 10/72,000.

$ab + cd$ Default spacing of 3,300 (0.045 inch)

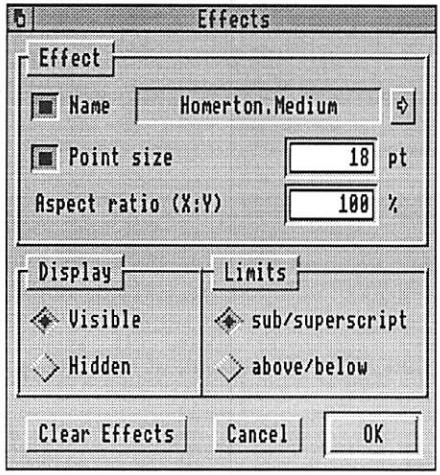
$ab \quad + \quad cd$ Spacing of 18,000 (0.25 inch)

Leading

(Pronounced *ledding*. It originally referred to the strips of lead used to separate lines of text set in metal.)

This is the vertical separation between lines of text. Change its value in the same way as described for Spacing.

Effects



Keyboard short-cut: *Ctrl-F7*

This option is greyed unless there is a selected region of text.

The dialogue box allows you to change the appearance of parts of an equation. This is useful if you want to highlight something in an equation or to set a minimum font size.

Using dialogue boxes is described in the *Introduction* chapter of this manual.

OK

Pressing *Return* has the same effect as clicking on this button.

Click on this button to implement any changes you have made in this dialogue box.

Cancel

Click on this button to cancel any changes that have not yet been incorporated into the document. (The document is only changed when you click on **OK** or **Clear effects**.)

Clear effects

Click on this to clear any effects currently applied to the selected region.

Effect

Fonts and font sizes are described in the *Introduction* chapter of this manual.

The editable fields **Name** and **Point size** display,

- if a single character is selected, the font and size of that character, or,
- if a region is selected, the current *Operators* font and font size.

Name

This option is greyed unless the switch to the left of the name is **on**. This lets you set other effects without changing the fonts used in the selected region. (The switch is set **on** if a single character is selected and an effect has already been applied to that character.) Click on the switch to alternate between **on** and **off**.

Click on the arrow to the right of the editable field to display a menu of the available fonts.

Click on the name of a font to select it.

Point size

The operation of this option is similar to the **Name** option already described.

Type in the required font size (height).

Aspect ratio (X:Y)

This option is greyed unless the switch to the left of **Point size** is **on.**

Changing the aspect ratio changes the width of the characters. Ratios greater than 100% give wider characters; less that 100% narrower characters. (200% gives characters twice as wide as normal; 50% half as wide as normal.)

Display

This option is greyed if the selected region covers more than one character.

Visible

Click on this switch to cancel a previously applied **Hidden** effect.

Hidden

Click on this switch to make the selected region invisible. It will still exist in the equation and can be restored by clicking on **Visible**.

This option is useful if you want to show only one of a pair of enclosing brackets. Insert the enclosing brackets into the equation as normal, select the unwanted bracket, and then click on **Hidden**.

Limits

This option is greyed unless the selected region includes one of these functions:

summation
product
integral
Ointegral.

Its use is similar to the **Limits switch** in the Tools display except that it allows you to change existing text.

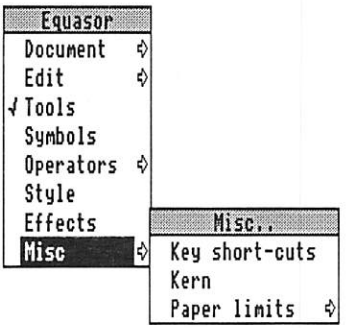
Sub/superscript

Limits are displayed in the subscript and superscript positions of the function.

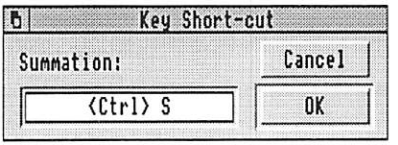
Above/below

Limits are displayed above and below the function to which they apply.

Misc



Key short-cuts



The functions in **Tools** can also be selected using control codes typed on the keyboard. The accent characters and the brackets do not have default control codes allocated to them. If you want to change some of these control codes or if you want to allocate codes to the accents or the brackets, use this menu option.

Acceptable short-cuts are **Ctrl-A** to **Ctrl-Z** and the 12 function keys. Be careful: many of the control codes A to Z are used for selecting menu options. If you allocate one of these codes to a Tools function, it will no longer select the menu option. (Appendix 2 has a complete list of control codes and their allocations.)

When the short-cut dialogue box is on screen, click on the appropriate symbol in the tools display. The name of the symbol and any existing key short-cut are displayed in the dialogue box. To enter a new short-cut character press down the *Ctrl* key and then type the character. The new character is displayed in the dialogue box.

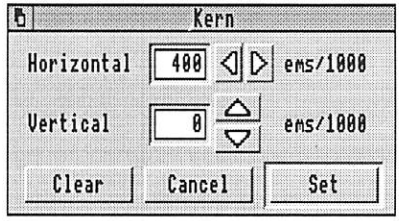
To implement a change either click on the **OK** button or press *Return*. If you click on another symbol in the tools display without clicking on **OK** or pressing *Return*, any change is lost.

To cancel, click on **Cancel** or the close icon or press *Esc*.

The default keys are:

Ctrl-D	divide
Ctrl-F	product
Ctrl-I	integral
Ctrl-N	nth root
Ctrl-O	Ointegral
Ctrl-P	power
Ctrl-Q	square root
Ctrl-S	summation.

Kern



Keyboard short-cut: *Ctrl-F2*

This option is greyed if there is a selected region.

Certain character pairings appear either cramped together or too widely spaced. An example is AVE where there is a wider space between AV than VE. Horizontal kerning allows you to increase or decrease the space between two characters to overcome this effect.

Vertical kerning similarly increases or decreases the distance between two lines to give a balanced look. It can also be used to vertically offset part of a line.

The measurement used is an **em** which is the width of the character **M**. It is a widely used measurement in typesetting because it is relative to the font size – a 20pt em is wider than a 10pt em. If you change the font size, em spacings automatically adjust to the new size whereas measurements in centimetres or inches would not.

Kerning is applied locally between two characters or two lines. It does not alter all the spacings in the equation. To do that, use the **Spacing** and **Leading** options in **Style**.

Clear

To cancel previously set kerning, position the cursor to where the kerning was applied and click on **Clear**.

Cancel

Click on **Cancel** to quit without making changes. *Esc* has the same effect.

Set

As previously described, any changes are only made permanent when you click on this box. If you click using **Select**, the dialogue box is closed; if you use **Adjust**, it remains on the screen and you can make further adjustments.

Horizontal

Position the cursor between the character pair. You can change the kerning by:

- Entering a new value in the editable field. To implement the new value, you must click on **Set** or press *Return*. If you quit without setting, any changes are lost.
- Clicking on the bump icons to the right of the box to change the kerning in steps of 10/1000ths (that is 0.01) of an em. The arrows work logically – the left arrow decreases the separation, the right arrow increases it. As you click on the arrows the characters move to show the effect. This is only a temporary change; to make it permanent you must click on **Set** or press *Return*. If you quit without setting, any changes are lost.
- Using the keyboard (each key-press changes the kerning by 50/1000ths (0.05) of an em):

  Ctrl-E increases the kerning, and
  Ctrl-R decreases the kerning.

Vertical

This operates in a similar way to horizontal kerning.

Position the cursor in the lower of the two lines where you want kerning to start. Remember to **Set** any changes you make.

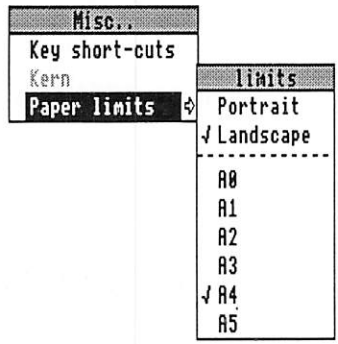
On the keyboard:

Ctrl-J moves text down, and
Ctrl-U moves text up.

If you want to kern the entire line, position the cursor at the start of the line.

You may want to kern only a part of a line. For example, suppose you have a line **abcd** and want to kern **bc** upwards (**a**$^{\textbf{bc}}$**d**). Position the cursor after **a** and kern **bcd** upwards. Reposition the cursor after **c** and kern **d** down to its original alignment.

Paper limits



Use this option to change the size of the document. The default document (the document that appears when you click on the Equasor icon) is A4-sized (210 mm × 297 mm), portrait orientated.

Slide over the arrow to the right of the option name to display a further menu. On this menu, the currently selected values are shown with a tick against them. There are always two ticked options:

either **landscape** or **portrait**

one of the paper sizes **A0** to **A5**.

To choose a different value, click on its name. The tick is removed from the original option and appears against the option you have just chosen.

Be careful if you choose a smaller size of paper – any text that lies outside of the new page boundaries is ignored. (Such text can be retrieved by resetting to a larger paper size.)

Portrait

The document is orientated with the long sides vertical. (Pages in this manual are portrait-orientated.)

Landscape

The document is orientated with the long sides horizontal.

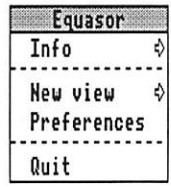
A0 to A5

These options select the document size.

size	(in mm)	(in inches)
A0	841 × 1189	33.1 × 46.8
A1	594 × 841	23.4 × 33.1
A2	420 × 594	16.5 × 23.4
A3	297 × 420	11.7 × 16.5
A4	210 × 297	8.3 × 11.7
A5	148 × 210	5.8 × 8.3

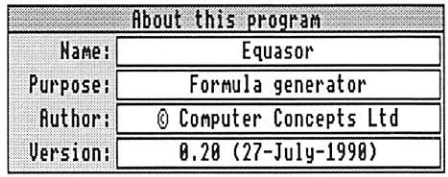
8. Icon Bar Menu

The Icon Bar Menu controls features of the Equasor application rather than individual documents. To display it, position the mouse pointer over the Equasor icon on the icon bar and click **Menu**.



Some of the menu items have a small arrow to their right. Slide the mouse pointer over the arrow to display a further submenu or an information box. The other options are selected by clicking on their name. This is the standard way of choosing from Archimedes' menus.

Info



This displays an information box about Equasor. The most important item is **Version**. If you have a query about Equasor, note down the issue number and date shown in this box before calling Computer Concepts.

In the illustration, the issue and date are

0.20 **27th July 1990**

New view

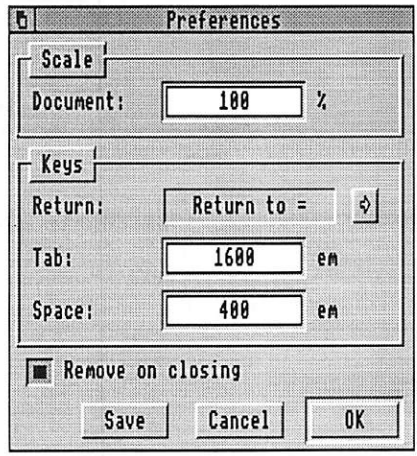
This option is greyed (not available) if there are no documents loaded in memory.

When you close an Equasor window you do not delete the document from memory. If you later want to find out which documents are currently in memory, choose this option. If a document's name is ticked, a window is currently open onto

that document.

To open a window on a closed document simply click on its name. You cannot have two windows open on the same document.

Preferences



This dialogue box allows you to change the default values whilst Equasor is running. It also allows you to save the current preferences in the Equasor application so that these become the defaults.

Changing any of these preferences does not alter a document or any text already displayed. Changes only apply to documents opened subsequently or to text entered after you click on **OK** or **Save.**

Click on **OK** to use, but not save, the new preferences.

Click on **Cancel** to ignore any changes made to the preferences.

Click on **Save** to use the new preferences and also save them within Equasor, so that they will also take effect each time Equasor is loaded.

Scale – Document

When you open a window on an Equasor document, this option sets the scale of that window.

Keys

Return

When you press *Return*, a new equation is started below the equation currently containing the cursor (the *current equation*). This option controls where the cursor is placed.

Click on the arrow to the right of the field to display a small menu. To change the current setting, choose a new setting from this menu.

Return to = aligns the cursor with any = sign in the current equation. If there is more than one = in the equation, the cursor is aligned with the left-most. If there is no =, *Returns* are ignored.

Return to start aligns the cursor with the left-hand side of the current equation.

Return to end aligns the cursor with the right-hand side of the current equation.

Tab

When you press the *Tab* key on the keyboard, a space is inserted into the equation with the value in this editable field. The default is 1600 (1.6 times the width of the character **M** in the current font).

If you change this value whilst creating an equation, any tab characters already in the equation are unchanged. All new tab characters take the value set in this field.

Space

This is similar in operation to **Tab** described above.

Space characters are converted into a space of the value in this field. The default is 400 (just under half the width of an **M**).

Remove on closing

With this option set, clicking on the Close icon closes the document and removes it from memory.

Quit

Choose this option to close the Equasor application and remove all documents from memory.

If any documents have unsaved changes, an alert box appears to warn you.

Click on **Quit** or press *Return* to quit and discard those changes.

Click on **Cancel** or press *Esc* to retain Equasor and all current documents in memory.

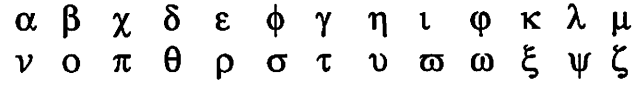
Appendix 1 - The extra fonts

The MathGreek font

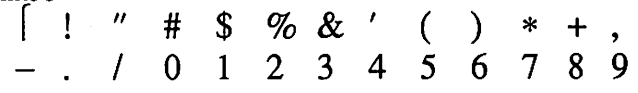
These are the characters available in the MathGreek font. They are arranged as they appear in the Symbols display and are shown enlarged:

line 1

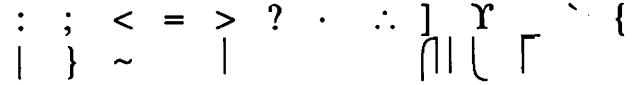
line 2



line 3

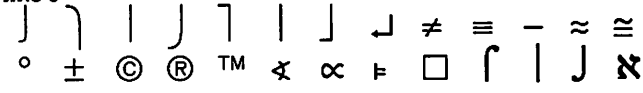


line 4

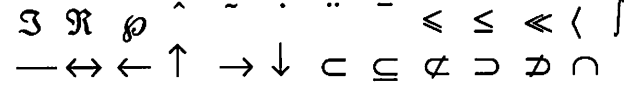


line 5

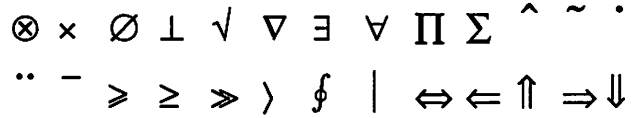
line 6



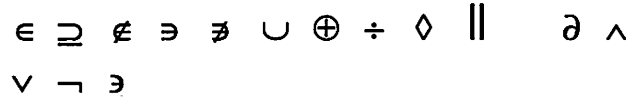
line 7



line 8 (the accent symbols are enlarged more than the others)

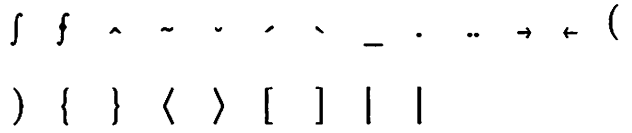


line 9



The Equasor font

This font contains these symbols (shown enlarged):



Appendix 2 - Keyboard short-cuts

Short-cuts marked † select functions from Tools; they can be changed using the menu option **Key short-cuts.**

	Ctrl-A	New equation
	Ctrl-B	Select object to left of cursor
	Ctrl-C	Copy selected item to clipboard
†	Ctrl-D	Divide
	Ctrl-E	Horizontal kern (expand space)
†	Ctrl-F	Product
	Ctrl-G	— *not used* —
	Ctrl-H	— *not used* —
†	Ctrl-I	Integral
	Ctrl-J	Vertical kern (move down)
	Ctrl-K	Delete item
	Ctrl-L	— *not used* —
	Ctrl-M	— *not used* —
†	Ctrl-N	Nth root
†	Ctrl-O	Ointegral
†	Ctrl-P	Power
†	Ctrl-Q	Square root
	Ctrl-R	Horizontal kern (decrease space)
†	Ctrl-S	Summation
	Ctrl-T	Select all
	Ctrl-U	Vertical kern (move up)
	Ctrl-V	Paste clipboard contents
	Ctrl-W	— *not used* —
	Ctrl-X	Cut selected item to clipboard
	Ctrl-Y	— *not used* —
	Ctrl-Z	Deselect region
	F1	— *not used* —
	F2	— *not used* —
	F3	Save dialogue box
	F4	— *not used* —
	F5	— *not used* —
	F6	— *not used* —
	F7	— *not used* —
	F8	— *not used* —
	F9	— *not used* —
	F10	— *not used* —
	F11	— *not used* —
	F12	— *not used* —

Ctrl-F1	Info dialogue box
Ctrl-F2	Kern dialogue box
Ctrl-F3	Resave existing document
Ctrl-F4	Tools dialogue box
Ctrl-F5	Symbols dialogue box
Ctrl-F6	Style dialogue box
Ctrl-F7	Effects dialogue box
Ctrl-F8	— *not used* —
Ctrl-F9	Scale view dialogue box
Ctrl-F10	— *not used* —
Ctrl-F11	— *not used* —
Ctrl-F12	— *not used* —
Shift-F1 to F10	Scale current window from 10% to 100% actual size
Shift-F11	Scale current window to half present size
Shift-F12	Scale current window to twice present size

Appendix 3 - Using the MathGreek font with PostScript

Before you can use any new font with the PostScript printer driver, you have to alter a file within the driver which tells it which Acorn fonts are available, and which PostScript fonts they correspond to. The same is true for *MathGreek*, except you have to make a much larger change than for ordinary fonts.

Method

- Find the PostScript printer driver you use (called *!PrinterPS*).
- Open the application directory by holding down the *Shift* key and double-clicking on the *!PrinterPS* icon. This opens a directory window containing several assorted files. These are the files used by the printer driver.
- You have to edit the file called *PSprolog*. Load in the *!Edit* application (which came with your Archimedes, on Applications disc 1). The Edit icon will appear on the right hand side of the icon bar.
- Load in the *PSprolog* file by dragging its icon onto the Edit icon. A window will appear with the file in it, which you can then edit.
- The first change to make is to add the PostScript font name *Symbol* into the list of font names at the top of the file. Make sure that you exactly follow the format of existing names. If you have to start a new line, the first three characters **must** be `%%+` followed by a single space, then the font name.
- Next, move down the file. You will see a large section of text containing many lines like:

```
/currency /yen /brokenbar /section
```

At the end of this section, there is a line:

```
] def
```

followed by a blank line, then a comment:

```
% Unless you really know what you are doing, do not edit the following
% PostScript, except for the indicated possible changes.
```

A section of text must be inserted between the `]def` and the comment. Click the mouse on the blank line between the two. Then, find the file (supplied with the Equasor

package) called *EFFSymbEnc*. Drag that file onto the edit window containing the *PSprolog* file. The file will be inserted at the correct point in the *PSprolog* file.

- Go down to the bottom of the *PSprolog* file. Add the following line at the bottom of the file:

```
/MathGreek /Symbol EFF_SymbolEnc FF
```

- Once these changes have been made, save the *PSprolog* file by calling up the *!Edit* menu (click with the middle button over the *!Edit* window), and choosing the **Save** option.

Once these changes have been made, you should be able to use the *MathGreek* font with any PostScript device that contains the *Symbol* font (most do).

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Introduction

WordWorks is a combined thesaurus and dictionary, designed for integrated use with Impression, but suitable for use with other word processors and DTP packages. The data is licensed from Collins and is equivalent to that in the respected Collins GEM series.

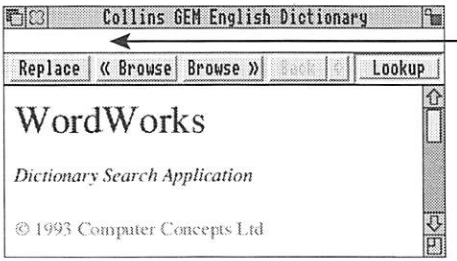
Loading WordWorks

If WordWorks has been supplied as part of the Impression package then it should have been installed as part of the Impression installation process. If you have bought this as a stand alone program then insert the disc into the floppy drive, double click on !Install and follow the instructions on screen. Once installed just double click on the !WordWorks icon as usual for starting RISC OS programs. The WordWorks icon will appear on the icon bar.

Note that WordWorks requires the Acorn Font Manager *!Fonts* and so the *!Fonts* icon must be showing in one of your directory windows.

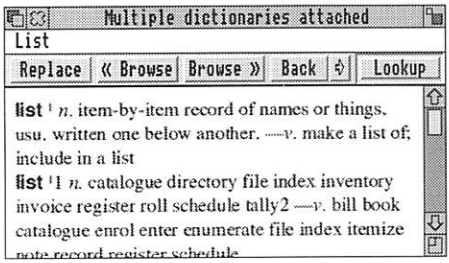
The WordWorks Window

A blank WordWorks window opens automatically when WordWorks is loaded - alternatively clicking on the WordWorks icon on the icon bar will open a window.



The WordWorks window is best explained by an example. The title bar

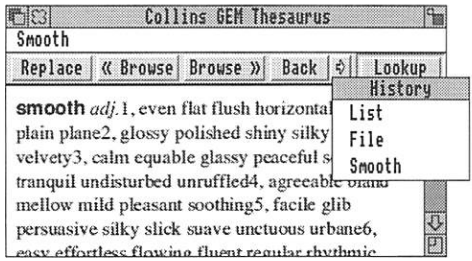
will state what type of window this is - by default is will start by showing "Multiple dictionaries" which means thesaurus and dictionary. Apart from the title bar the windows are identical in appearance and use. Delete any text in the search field (*Ctrl-U* clears the entire field) and type in the word *list*. (WordWorks treats upper and lower case characters as identical so you could type *list* or *LIST*.) Press *Return* or click on **Lookup** to display the entry.


Multiple dictionaries attached
List
Replace
« Browse
Browse »
Back
Lookup
list 1 n. item-by-item record of names or things, usu. written one below another. —v. make a list of; include in a list
list 1 n. catalogue directory file index inventory invoice register roll schedule tally2 —v. bill book catalogue enrol enter enumerate file index itemize

List in fact has several meanings and can be used as a noun or as a verb. The window shows the dictionary definition of the noun (the *n.* denotes a noun) and the verb (*v.*) and then shows the synonyms from the thesaurus.

You can use the entry to continue looking for the most appropriate word. For example, using the synonym entries for the word *list,* double-click on the word *file.* This displays the alternatives to *file* - click again on the word *smooth* and it brings you alternatives to *smooth.* If no word is found the computer will beep.

It is easy to get involved in the dictionaries and forget the original purpose of the search. The **Back** button works like an undo option, taking you back through the search process, one word or phrase at a time - in this case from *smooth* to *file* to *list.* Alternatively click on the arrow to the right of the Back button to bring up a listing of the history of phrases looked up (it now shows *list, file, smooth*) - clicking on any of these will take you back to the results of that search.



Another way of searching for further words is to use the **Browse** option. This simply moves you around the contents of the dictionary in alphabetical order, starting with the selected word.

When WordWorks is being used with Impression, selecting on any word or phrase in the Impression document will automatically bring up the WordWorks window with the word in the search field and the dictionary definitions. This level of integration is only possible with Impression.

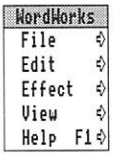
If you want to transfer any of the words or phrases found back to Impression, mark the word and just click on **Replace** (or adjust double click with the mouse). This passes the word back to Impression and over-writes the original selected area.

Full Search

Normally WordWorks searches all head words or keywords, but if none are found then it will do a full search for the word anywhere in the text of the dictionary or thesaurus. (This uses the "inverted index" feature of WordWorks).

To force a full search, avoiding the head word and keyword searches, just precede the text with a hash # character. Since it's quite likely this will find a very large number of entries, rather than show them all, this produces a list of entries - and you can just double click on one of these to show the full text.

The Main Menu



To display the main menu simply click on the menu mouse button over the WordWorks window.

File

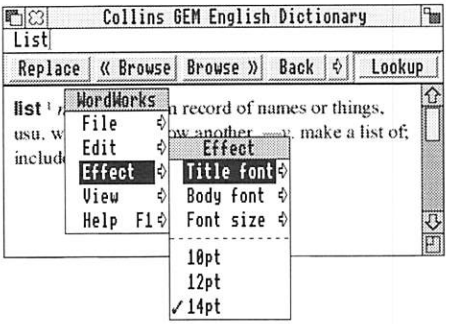
This lets you either **Save** as a text file or print the current entry by dragging the file icon onto the printer icon. The **Info** item provides information on the current dictionary - its name and the number of keywords, records and words it contains.

Edit

The only option available is to select all of an entry. This is useful, for example, if you wish to copy the complete definition into your Impression document bu using the Replace button.

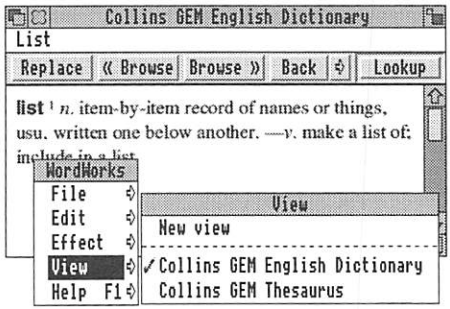
Effect

The effects menu has two items which can set the displayed fonts, **Body Font** and **Title Font.** Both items lead to a standard font menu which shows the current font selection with a tick. You can select the family name on the font menu - WordWorks is able to work out which fonts to use for the bold and italic versions. The Body Font is used by main text in an entry and the Title Font by the title or keyword(s). Changing the font size will alter the font size of both the body and title text.



View

This lists all the loaded dictionaries which can be viewed and allows you to look at several dictionaries in one view. When several dictionaries are viewed at once (and the GEM dictionary and Gem thesaurus are taken to be two dictionaries in this context) then they are shown in the same window, once below the other. This is particularly useful if you need to look at both the thesaurus and dictionary entries for the same word. Using the example above, if the word *list* is selected with the dictionary definition showing in the window and you wish to read the synonyms, then select View and click on Collins GEM thesaurus.

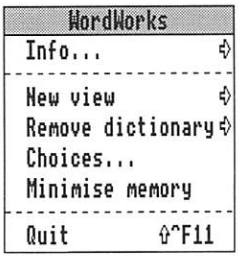


Help

This enters the on-line help. On-line help can be used instead of a conventional manual. This leads to a sub-menu of more specialised help relating to particular subjects. Double-click on an entry to display information on that subject. Most pages have some words in colour – these are **hyper-text links** (to use the jargon). Double-clicking on link words will take you to their page in the help dictionary.

You can also read through the help pages in sequence, like reading a manual. Click on Browse>> and <<Browse to move between pages.

The Icon Bar Menu



Info

This displays information about WordWorks. Please quote the Version number from this information box if you need to contact Computer Concepts with a query about WordWorks.

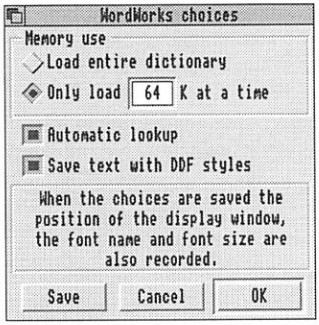
New View

WordWorks can have many dictionary and/or thesaurus windows open at once. Either click on one of the dictionary names in the New View sub menu or simply select click on the icon bar.

Remove Dictionary

This allows you to remove dictionaries from memory.

Choices


WordWorks choices
Memory use
Load entire dictionary
Only load 64 K at a time
Automatic lookup
Save text with DDF styles
When the choices are saved the position of the display window, the font name and font size are also recorded.
Save
Cancel
OK

The choices menu allows you to manage the program to suit the memory available on your machine. The dictionary and thesaurus are large and we recommend that you select **Only Load 64K at a time** if you have 2MBytes or less in your machine.
Automatic lookup. This determines whether double clicking on a word or phrase in Impression automatically causes WordWorks to search on the selected word/phrase. If the radio button is not selected, then a WordWorks window can still be opened by clicking on the WordWorks icon and entering the word or phrase into the search field.

Save Text as DDF files. This effectively means that you can save files as text, the advantage being that they retain all style information when transferred into Impression.

When the choices are set, they can be saved by pressing the **Save** button - in this case they will still be set when the program is loaded again. **OK** will save them until the program is quitted.

Minimise memory

This removes all unused WordWorks dictionary data from memory.

Quit

This is the usual option to close the window and remove the WordWorks program from memory.

TableMate II

This Voucher is worth up to £15! Keep care of it.

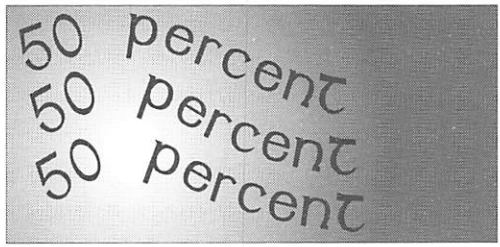
A new version of TableMate, called "TableMate II" is scheduled for release in the first quarter of 1994. TableMate II will have a number of improved and additional features, such as colour handling, variable rule widths and word-wrapping in columns.

When TableMate II is released, it will be publicised through the main Acorn magazines and periodicals.

Purchasers of Impression Style or Publisher can upgrade the copy of TableMate bundled with Impression to TableMate II at a very special discount of 50%, up to a maximum of £15.

When TableMate II is released, send this voucher with your payment for the remainder of the normal price.

The original voucher, and not a photocopy must be sent.



TableMate II will be available from: Dalriada Data Technology 145 Albion Street, KENILWORTH, Warwickshire, CV8 2FY.

TableMate II is not a product of Computer Concepts Ltd.

All technical enquiries about the copy of TableMate enclosed with this version of Impression should be addressed to Computer Concepts Ltd.

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Introduction

TableMate is a simple utility for creating tables easily and quickly for Impression Style and Publisher. CSV (Comma Separated Values) files can be imported, allowing tables to be created using data from your database or spreadsheet.

TableMate can create two types of table for use in Impression - a graphic table for use with the Impression OLE facility or a text table which can be imported into any text in Impression and edited in situ. Both types of table are created in the same way - the only difference comes when saving tables into Impression.

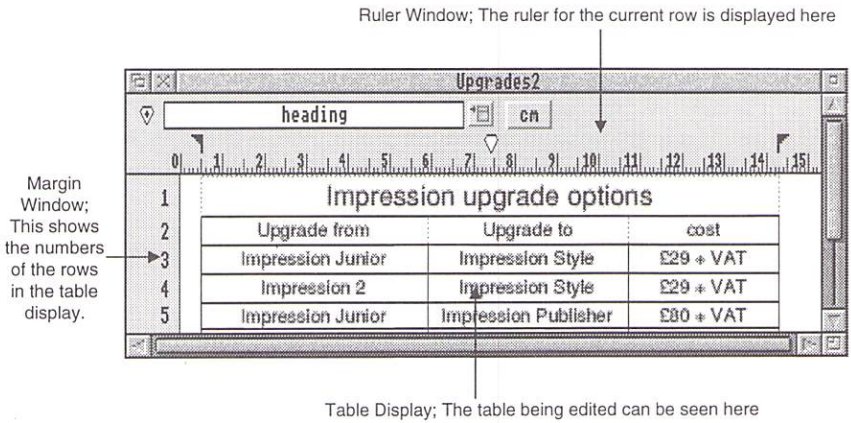
Loading Tablemate

TableMate is loaded by double clicking on the TableMate icon in the normal manner. A left click on the icon on the icon bar will open a blank TableMate window.

To edit an existing table within Impression it is not necessary to load TableMate in this way. Instead it uses the OLE capabilities (covered in the Impression manual).

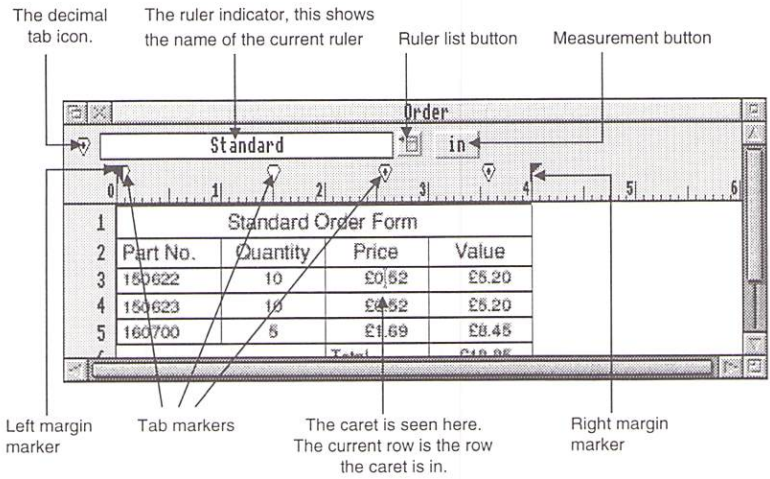
Basic Principles

Understanding the Screen



This is a typical display of a TableMate window. There are three main areas to note - the Ruler Window, the Margin Window and the Table Display. The Ruler Window needs some further explanation and its different components are shown below:

The Ruler Window



The current ruler is shown at the top and the name of the ruler is shown in the **Ruler Indicator** at the top. The current ruler is that being used in the current row at the cursor position. To rename a ruler, simply edit the name of the ruler when it appears in the **Ruler Indicator** and press the *Return* key when you have finished.

The current measurement is shown on the **Measurement Button** next to the Ruler Indicator. There are two choices of measurement - centimetres and inches. The measurement in use can be changed by clicking on the button.

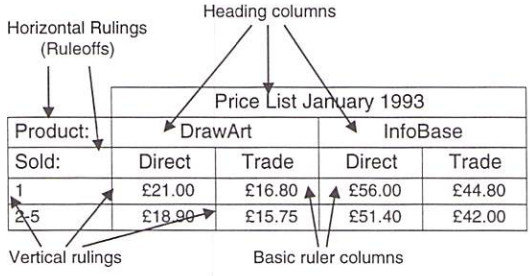
Clicking on the **Ruler List** button will show a menu which can be used to control the ruler in use in different parts of the table. It has two parts; at the top an item to create new rulers, and secondly a list of rulers which can be chosen. These behave exactly like the New Ruler and Select Ruler options described in the Ruler Menu section below.

There are different tabs being displayed, as well as left and right margins. These are similar to those used in Impression. How to change the tabs is described below.

The Table Display

Rulers

The table is arranged using various rulers, which can be created, changed or removed as required. Each row in the table uses one, and only one, ruler. All rulers in a table are derived from the basic ruler. This ruler is the only ruler which exists when a new table is started, and by default is called "Standard". All other rulers are referred to as heading rulers. Rulers are described in detail in the Heading Rulers section below.



An example display, showing the different types of columns and rulers in the table display.

Rulers control the column positions in the rows which use them, the tabs used in those columns and also which column edges are invisible or shown in black.

Every row can have a ruleoff, or horizontal line, beneath it, and this is not affected by the ruler used on it.

Every column in a ruler can have its own choice of tab. Each column is normally lined on its left and right by a vertical ruling, as is normal in a table.

Headings can be created which cover more than one column in the basic ruler using the heading rulers (more details below). These heading columns are otherwise treated just the same as normal columns, for example having their own tab settings.

Text in a column cannot spill over into the column to its right. If more space is needed in a column, either join the next one to it, or make it wider.

A cell is a single column in a row, whether it uses the basic ruler or a normal ruler, like in a spreadsheet. Each cell can have its own choice of font and text height.

Heading Rulers

The concept of heading rulers may need some clarification. The table below is used as an example:

	Subject		
Name	English	Maths	Average
John Adams	53.0%	65.0%	59.0%
Jill Anderson	61.0%	62.0%	61.5%

The lower two rows are in the **basic ruler**. The other two rows use **heading rulers**. The lower of these two rows seems virtually identical to the basic ruler, but it does however have different tab choices. The top row is in a very different ruler. As already described, heading rulers are based on the basic ruler. A column in a heading ruler is either a single column in the basic ruler, or as in the top row here, a combination of two or more columns in the basic ruler. A heading column can only start or end at the edge of a column in the basic ruler. This fixed relationship may seem odd, but when the width of a

column is changed, all becomes obvious - all the rows underneath change automatically, speeding up the process of modifying the table.

The top row also has left and right margins set. Margins too are restricted to where the basic ruler columns start and end (this makes obvious sense given the restriction on column positions). This feature allows columns to be 'lost' from the edge of the table when the columns aren't required in a heading.

Margins in Heading Rulers

Every heading ruler can have left and right margins set. The margins are used in situations where the whole width of the basic ruler is not required. For instance, look at the table in the section above where there is a heading over the second and third columns only.

The margins are locked to the positions of the vertical rulings of the basic ruler, ie. a margin can only be at the edge of a column. To move a margin, follow this procedure:

- Move to a row which contains the ruler to be changed. The ruler identification in the top margin will change to the ruler name.
- Move the pointer to the left or right margin icon on the ruler bar.
- Press and hold the left mouse button. The pointer will change to the margin symbol.
- Drag the margin to the place where it should start.
- Release the mouse button. The pointer will return to normal and the margin will be locked to the nearest column edge.

Be careful! If the new position is to the right of the original position for a left margin, or to the left for a right margin, the text in the intervening columns will be lost. If, on the other hand, the margin is moved outwards, the column on the margin edge will be extended to the new size. It may be split if the intention is to divide it into its component basic ruler columns.

Margins in the Basic Ruler

To set the left margin for the whole table, so it is moved across the page, either drag the vertical ruling on the left edge of the table using the left mouse button, as described in Setting Column Positions below, or drag the Left margin tab displayed in the ruler window when the basic ruler is the current ruler. It is advised that you use the Left mouse button only. The right margins of the basic ruler can similarly be set by either procedure.

The Main Menu

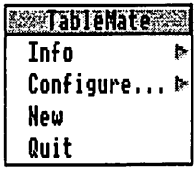
The Main Menu appears when the middle mouse button is pressed.

- Save a file; see The File Menu page 12
- Add or remove a column or row; see The Edit Menu page 15
- Change font and ruleoff settings; see The Style Menu page 18
- Change the settings of the vertical lines; see The Lines Menu page 19
- Operations to control rulers; see The Ruler Menu, page 19

The submenus can be opened by moving through the arrow to the right of the corresponding item with the pointer.

The Icon Menu

This menu appears over the TableMate icon on the icon bar.



- Standard program information on TableMate
- Configure TableMate; see Configuring TableMate page 21
- Discard the current table and start a new table
- Exit TableMate

Using Inches and Centimetres

To switch the top ruler between displaying inches and centimetres, click inside the measurement button in the ruler window, which displays "cm" or "in". It will change to the other unit of measure. The default column width is taken from this setting, one inch for inches, and 2.5 cm (25mm) for centimetres.

Using the Keyboard

When the program is accepting input from the keyboard to the table, its window border will be cream, as with most RISC OS programs. The current cell is indicated by the presence of the cursor and any text which is typed will be entered into the cell at that point. Clicking in a cell with the left mouse button will move the cursor to it. The following keys move the cursor around

the table. Attempting to move beyond the current bottom or right hand limits of the table will cause it to automatically extend.

Tab	Next Column	*Shift+Tab*	Last Column
Arrow Left	Last Character	*Arrow Right*	Next Character
Ctrl + Arrow Left	Left of table	*Ctrl + Arrow Right*	Right of table
Arrow Down	Down a row	*Arrow Up*	Up a row
Page Up	Scroll up	*Page Down*	Scroll down
Ctrl + Arrow Down	Bottom of table	*Ctrl + Arrow Up*	Top of table
Ctrl + U	Clear text in current cell		
Return	Move down a row, and to the left most column.		

Setting Column Positions

The widths of columns can be set by dragging the vertical ruling lines next to them. When setting column positions, the program will 'lock' their final position to an invisible grid based on the current unit of measure. This grid has spacings of 1/24th of an inch for the inches setting, and 1mm for the centimetres setting. The columns are set by following this procedure:

- Move the cursor over the vertical line in the table which is on the right of the column to be changed. The cursor should change shape:

- Press and hold the left or right mouse button. Using the left mouse button the width of the column to the left of the line will be altered, and columns to the right will remain the same width. Using the right mouse button the columns immediately to the left and right of the line will become wider or narrower as you move the pointer. The overall width of the two columns will remain the same. Only the one vertical line will move.
- Drag the pointer left/right to the required new position for the vertical line.
- Release the mouse button. The vertical ruling lines will be repositioned as required, and text will be re-justified automatically as needed. Decimal tabs will be repositioned if they end up outside their column.

Setting and Using Tabs

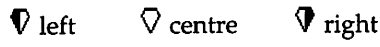
Tabs are set using the rulers. Within each ruler, every column can use either one of three text tabs or a decimal tab. The text tabs are the normal left, centred or right tabulations. Each of the text tabs has a fixed position in a column, which will be automatically repositioned when the column width is

made larger or smaller. When a new column is created, it has a left text tab by default.

Selecting Tabs

The type of text tab can be selected in the following way:

- Move to the row which contains the ruler which requires the tab. The ruler name will appear in the Ruler Indicator display in the Ruler Window.
- Move the pointer over the tab icon in the Ruler Window, press and hold the left button.The pointer changes into a tab icon shape with a question mark in it.
- Drag the mouse, holding the button down, to the left, centre or right of the column which requires the tab to be set, depending on the type of tab required.
- Release the mouse button. The ruler should display the desired type of tab marker:



Decimal Tabs

Unlike the left, right and centre tabs, the decimal tab for a column can be placed at any position in a column. Decimal tabs can only be used instead of a text tab.

Selecting a decimal tab.

- Move to the row which contains the ruler which requires the tab. The ruler name will appear in the Ruler Indicator display in the Ruler Window.
- Move the pointer over the decimal tab icon on the Ruler Window, press and hold the left mouse button. The pointer will change to the decimal tab icon:

- Drag the mouse, holding the button down, till the pointer is inside the column which requires the decimal tab, and at the correct position in the row for the decimal point. Ensure that the tab pointer is at the same height as the other tab markers.
- Release the mouse button.The decimal point icon should appear where the mouse button was released. The old tab marker will disappear.

Note: Releasing the mouse button when above the line of tabs at the bottom of the Ruler Window will release the decimal tab.

Moving a decimal tab

- Move to the row which contains the ruler in which the tab is to be moved. The ruler name will appear in the Ruler Indicator display in the Ruler Window.
- Move the pointer over the decimal tab which is to be moved.
- Press and hold the left mouse button. The pointer will change to the decimal point icon.
- Drag the mouse until the pointer is at the position where the tab is required, keeping at the level of the tabs elsewhere on the ruler.
- Release the mouse button. The pointer will return to normal. The decimal tab will be re-located.

Removing a decimal tab

- Move to a row which contains the ruler in which the tab is to be removed.
- Move the pointer over the decimal tab which is to be removed.

Then either:

- Click the right mouse button. The decimal tab will disappear. The column will now have a left text tab (see above).

OR, alternatively:

- Press and hold the left mouse button, and the pointer should change to a decimal tab.
- Drag the mouse pointer to above the line of tabs at the bottom of the Ruler Window.
- Release the button, and the pointer should return to normal.

Selecting a block

Blocks can be used to set the text size or font used in a number of cells, set the ruler used in a series of rows, or alternatively they can be moved or copied to another part of the table. Blocks can also be "blanked". Blocks can only be selected within a range of rows which use the same ruler, or rulers which have the same column boundaries.

To select a block:

- Move the pointer to the top left cell in the block you wish to choose.
- Press the left mouse button, and hold it down.
- Drag the pointer to the bottom right hand cell of the block you wish to select.
- Release the mouse button.

Alternatively, the right mouse button can be used:

- Make the cell at the top left hand corner of the wanted block the current cell.
- Move the pointer to the cell at the bottom right hand corner of the wanted block.
- Click the right hand mouse button.

Using this second method, a chosen block can be changed in shape and size.

Clearing a block selection

A block selection can be cleared by pressing *Ctrl+Z* on the keyboard, or by using the **Clear** option from the **Edit Menu**, or by clicking the left mouse button in a cell.

The File Menu

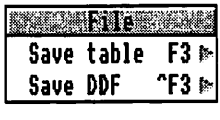
File Handling

TableMate will load files of two formats. Firstly, its own form of SID (Software Independent Data Format) files, and secondly CSV (Comma Separated Value) files.

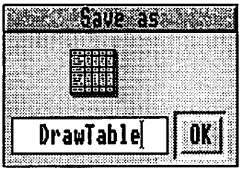
Two types of file can be saved. The first is its own file format, which should be used in order to be able to load a table at a later date and alter it. This format is also the one which should be used for OLE with Impression. Secondly there is the DDF (Data Definition Format) files used by Impression. See the later section "Tables as Text in Impression", for more information on DDF files.

Saving Files

To save a table in any format, click the middle button of the mouse to bring up the main menu. Move the pointer over the arrow to the right of "File" and move over the edge of the menu, at one of the two options. Each option saves a different type of file.



- Save a TableMate file
- Save a DDF file for use with Impression



Either of these options will open the dialogue box seen on the left. Enter the filename in the text field at the bottom. Press and hold the left mouse button on the file icon at the top and drag it into a directory window, then release the mouse button to save it. TableMate files can be saved from the keyboard by pressing the *F3* key. This dialogue appears and can be used as normal. Similarly, a DDF file can be saved from the keyboard by pressing *Ctrl* + *F3* and Draw files by pressing *Shift* + *F3*.

For the save dialogue, if the file has been loaded from disk or from an OLE session in Impression, simply either pressing the *Return* key while the cursor is in the text field at the bottom of the dialogue, or pressing the *OK* button next to it, will save the file back to its original place.

TableMate files in Impression

Impression can accept tables as either TableMate files, which can be dropped into a blank frame, or as DDF files, which can be inserted into the text (refer to Tables as Text below). When files are saved into Impression as TableMate files (just drop the save icon over a blank frame or drop the TableMate file over some text - in the latter case it will be placed into an embedded frame), Impression treats the table as a graphic - the graphic tool can be used to scale or rotate the table for example. However using the OLE facilities of Impression the file can be edited again in TableMate. To do this just hold down *Ctrl* and double click on the frame. This will launch TableMate and open the file for editing.

To return the edited table to Impression simply save it as normal - the short cut for this is to press *F3* followed by *Return*. Note TableMate is unusual in that this operation will terminate the program, so there is no need to do this explicitly.

Tables as Text in Impression

Tables created in TableMate can be imported into Impression as DDF files. This means it transfers the table as text along with appropriate style definitions, to draw horizontal and vertical lines in the correct place. The only real advantage of this method over the above OLE method is the ability to edit the text of the table in Impression. To save DDF Files into Impression:

- Place the cursor at the point in the Impression document where the table is to appear. This should NOT be in the middle of a sentence.

- Save the DDF file from TableMate into Impression by dragging the file icon into the window which has your Impression document in it.
  Note: Do not go into the Impression document and move the cursor about in between the two steps, because the table will appear at the last position of the cursor in the Impression document.

If things look strange in the table, particularly if the text seems to be out of alignment with the table lines, check that the text is left aligned.

When using more than one table in an Impression document using the DDF format files, please be careful when naming rulers. Ensure that each ruler has a unique name, and the same name is not used in more than one table. If more than one ruler is used with the same name, then tables which use the second, third or subsequent definitions will display the ruler which was first given that name.

In Impression the table can be edited further by using the normal ruler editing features. To update a table in a document from TableMate, delete the table text and the changed table rulers from the document, then re-load the new table data from a DDF file from TableMate. If the old rulers are not removed, the new definitions of the rulers will be ignored by Impression.

Finally, Impression will only accept tables with up to fifteen columns due to a restriction in the number of tab points available in a ruler.

Loading Files

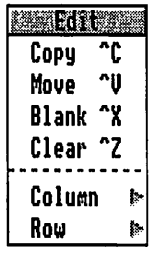
To load a file, drag it from a directory window to the program icon on the icon bar, or to the main window. A file should be in one of the two formats TableMate can load - its own or CSV files, though file types Text (&FFF), CSV (&DFE) and SID are all recognised and processed as well as possible. The program will then load it. If a problem arises, an explanatory error message should be given. If an attempt is made to load a file when the current file has been changed but not saved, then a message will be displayed asking whether you wish to discard the changes.

When a CSV or SID format file is loaded, the column widths are set so that each one is wide enough to display all the text in it. Also, the filename is 'forgotten', and a new one must be provided when it is first saved. This is done to prevent the file being accidentally overwritten.
When a CSV/SID file is dropped into the table window (but not the icon on the icon bar) and inside a row of the table, the contents of the file are, if

possible, inserted into the table before that row. This means it is possible to design master files with appropriate rulers, which can be subsequently re-used by dropping in a file with the desired content. However, if the file is dropped outside the table window or on the icon bar, it is loaded as described in the paragraph above.

The Edit Menu

The Edit menu can be used to copy and move selected blocks of text and to add and remove columns and rows.



Block Operations

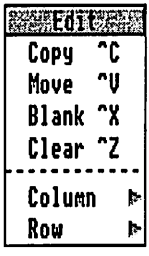
The following operations are in the Edit Menu and are available for selected blocks only (the Font Name and Font Size operations described under the Style Menu can be applied to blocks and to individual cells).

When a block is the whole width of the selected rows (ie. it starts in the leftmost column, and ends in the rightmost), the program treats the block in a special way; if the block is moved or copied, new rows are inserted before the row which is chosen as the destination point. These rows are given the same ruler as the chosen block. The text is copied complete with its styles into the new rows, and stays in the same position in the new block as it did in the old. If **Move** is selected, the source rows are deleted after the block is copied.

If the block is not the whole width of the selected rows, no new rows are created, nor is the ruler information used. Only the text and its style settings are moved or copied. When **Move** is used, the original area of the block has its font and font size choices reset to the default values. The ruler and rule offset settings remain the same. The difference between the way whole rows and parts of rows are handled may seem odd at first, but it makes life a lot easier in the long run.

To use the **Move** or **Copy** actions, the program must know where to move or copy the block to. This is done by moving the cursor to the cell at the top left hand of the position to which the block is to be copied or moved. The cursor may be positioned by using the cursor keys on the keyboard, or alternatively by moving the mouse so that the mouse pointer is over the cell in which the cursor should be, and then whilst holding down the *Alt* key of the keyboard, click the left mouse button. If whole rows are being moved or copied, then the block is inserted above the row in which the cursor is found.

The menu is shown below, with an explanation of each item.



- The block is copied to the destination.
- The block is moved to the destination.
- Clears the text, and resets the styles of the block.
- Undoes the selection.

} These items are described on Page 17

Alternatively, these operations can be performed using the keyboard. First, select the block as normal. Then to move or copy the block, move the cursor, using the keyboard controls only, to the destination point. Finally, press one of the following key controls, depending on which operation is required:

Ctrl + C	Copy selected block to current cell.
Ctrl + V	Move selected block to current cell.
Ctrl + X	Blank selected block.
Ctrl + Z	Cancel selection of the selected block.

Adding and Removing Rows and Columns

There are two methods of removing rows and columns. The first is by using the menu system, the second by using the keyboard.

Columns

Column operations are performed on the basic ruler. If one is selected when the current row uses a heading ruler, the program will work out which basic ruler column is affected. The heading rulers will then change correspondingly.

Using the menu:
Open the Edit=> Column submenu, which looks like this:

Column	
Insert before	F7
Insert after	⇧F7
Delete	F9

- A column is inserted before the current column.
- A column is inserted after the current column.
- The current column is deleted.

Using Keys:

F7	Insert Column before current column
Shift + F7	Insert Column after current column
F9	Delete Column

Rows

Using the Menu:
Open the Edit=>Row submenu, which looks like this:

Row	
Insert before	F8
Insert after	⇧F8
Delete	F10

- A row is inserted before the current row.
- A row is inserted after the current row.
- The current row is deleted.

Using Keys:

F8	Insert Row before current row
Shift + F8	Insert Row after current row
F10	Delete Row

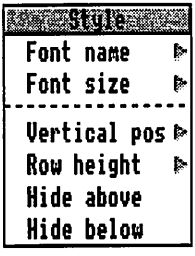
The Style Menu

Setting Styles

The **Style Menu** contains items to change the appearance of text and horizontal ruling lines in your table. If a block has been selected, then the operations will be done on the block, otherwise the current cell or a chosen line will be altered.

Any cell can use any font or size of text. However, each cell can only use one font in one size. If anything more complex than this is required, then the resulting DDF or Draw file will have to be edited in a relevant editor.

Below is an illustration of the **Style Menu**, with a brief explanation of each item. Full descriptions follow.



- Set the font used in the current cell or block
- Set the typesize used in the current cell or block
- Adjust the vertical positioning of text in the current row or block
- Adjust the height of the current row
- If ticked hide the line above the current row or in the current block
- If ticked hide the line below the current row or in the current block

Font name

When choosing a font, move the pointer over the item in the fonts submenu which represents the family of font you wish to use (eg. Homerton, Trinity). If there is an arrow on the right hand side of the item, then move the pointer through the arrow, and highlight a particular font (eg. medium or bold), and click the left or right mouse button. On the other hand, if there is not an arrow, simply click the mouse button over the font name straight away.

Font size

Font size can be chosen from the default list (6, 8, 10, 12, 14 or 18 point), or entered into the last item of the menu.
Note: Rows are automatically sized depending on the fonts which are used in them. The program finds the largest font used in the row and multiplies the size of it by a set factor.

For advanced users: The default font size can be configured. This should be one of the standard font sizes, expressed as a number of points. It is found

as TableMate$Size in the !Run file of the application directory. Similarly, the default font can be configured using the TableMate$Font variable. See the !Run file as an example.

Vertical pos

This dialogue box is used to adjust the vertical positioning of the text in the current row or, if a selection has been made, the currently selected rows. Increasing the space below the line (by pressing on the downwards arrow) will drop the text downwards, whilst the upwards arrow moves the text towards the top of the row. The table will only be changed by clicking on the **OK** button.

Row height

The height of a row is calculated by multiplying the height of the largest text size used in the row by a factor (usually of 150%). The height of the current row(s) can be adjusted by changing the factor given in this item. Note: The value cannot be less than 100%.

Hide above/Hide below

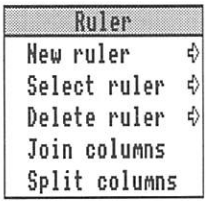
These options can be used to alter the status of the ruleoff (horizontal line) above or below the current line. When it is ticked the line is hidden, if not the line is shown - clicking on it toggles the setting. A tick indicates that the line is to be hidden. If a block is selected all lines which lie inside the block (ie. not at the top or bottom of the block) are changed if the item is clicked.

The Lines Menu

The lines menu is used to control the display of vertical lines on each side of the current column (ie. the one the cursor is in) in the current ruler. It consists of two items, Hide left and Hide right. When one is ticked, the corresponding column edge has its line hidden.

The Ruler Menu

This menu controls the use of rulers. When the cursor is not in the table, only the Delete control can be used. The joining of columns can only be used when a block has been selected to be joined. The menu is shown below, with a brief description of the function of each item. Full descriptions follow.



- Create a new ruler, and use it on the current row
- Select a ruler for the current row or block
- Delete an unused ruler
- Join two or more columns in the current ruler
- Split a joined column in the current ruler

New ruler

This option leads to a dialogue which asks for the name of a new ruler. Type the desired name into the text box, and press the *Return* key or the **OK** button in the dialogue. If the name is not used already, and is not reserved, a new ruler is created and applied to the current row (ie. the one with the cursor) or, if a block is selected, to the rows in the block. The ruler is started as a copy of the ruler presently used in the row/block.

Select ruler

This option opens into a submenu which contains a list of the rulers available, the basic ruler being first (at the top). The ruler used in the current row is ticked. Clicking on a ruler will set the current row to use it. The text in each column of the row will be used in the same column in the new setting of the row. If a block is selected, the ruler used in the rows in it will be displayed and chosen in this submenu.

Delete ruler

This option opens into a list of the rulers which are not being used. Clicking on a ruler name will destroy that ruler. If all rulers are being used, the item will be greyed out, and cannot be accessed.

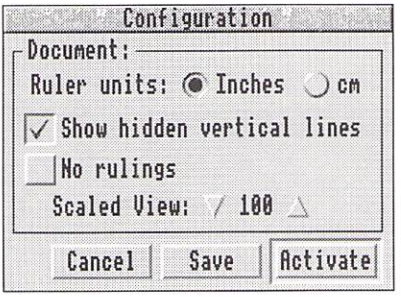
Join Columns

This joins the selected columns in the current ruler to make a heading column. All rows which use the ruler will be changed accordingly. The ruler must not be the basic ruler.

Split Columns

This splits the current column into the individual columns of the basic ruler it is made of.

Configuring TableMate



The configure dialogue is seen opposite. In the rectangle the various configurable options are shown. They can be altered and then either saved or activated using the corresponding buttons at the bottom of the dialogue. **Activating** a configuration changes the current behaviour or settings of TableMate, whereas **Saving** a configuration means that the next time a new table is started in TableMate, that set of choices will be used.

Clicking on the **Activate** button closes the dialogue, but the **Save** button does not. Therefore, if the current set of options is wanted as a default, and it is to be used now, click on the **Save** and **Activate** buttons in that order. Each table has its measurements saved with it, and these measurements will be used when a file is loaded. The other options work as follows:

- Ruler units; indicates which unit has been selected.
- Show hidden lines; this option displays a dashed light blue line wherever a horizontal or vertical ruling is hidden. This often makes changing column widths easier when they are hidden, and we recommend that this setting is On.
- No rulings; a quick way of making a table plain (ie. with no vertical or horizontal lines).
- Scaled view; available in 5% steps, allowing a table to be seen in whatever scale is required.

Creating an Example Table with Headings.

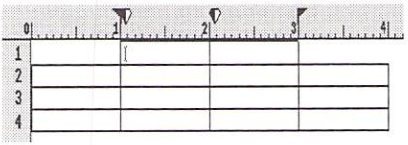
As an example of how to create a table, we will explain here how to create the table used as an example in the Heading Rulers section of this manual.

	Subject		
Name	English	Maths	Average
John Adams	53.0%	65.0%	59.0%
Jill Anderson	61.0%	62.0%	61.5%

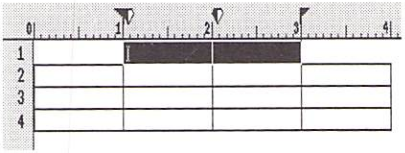
- Load TableMate, and ensure that the measurement in use is inches. ("in" should be displayed in the measurement button in the ruler display at the top of the TableMate window. If "cm" appears, click on it so that it changes to "in").
- Using insert column & row menu options, or the corresponding keystrokes (eg *F7/F8* or *TAB/Arrow Down*), extend the table to four rows and four columns.
- Now place the cursor into the first row (ie the one at the top). Bring up the main menu by clicking the menu button on your mouse. Enter the Ruler submenu by moving through the arrow to the right of the main Rulers Menu. Enter the New Ruler dialogue by moving through the arrow to the right of "New Ruler". Type "Heading" into the writable icon, and press the Return key or click on the **OK** button with your left mouse button.
- You have now created a ruler for the first row.
- Now click into the second row to place the cursor there. Repeat the process above for the first row, except give the new ruler the name "ColumnTop".
- This has now created a ruler for the second row. The appearance of the table should not have changed from a four by four grid.
- Now click into the first row again.
- Find the left margin marker which is on the far left hand side of the table, in the ruler display at the top of the TableMate window:

- Press and hold the left mouse button while over the margin marker, and the cursor arrow will change into the shape of the margin marker.
- Drag the marker to near the border of the first and second columns.
- Release the button. The left hand edge of the first row will now appear to be at the borders of the first and second columns elsewhere.
- Now repeat this process for the right hand margin, except move it to the

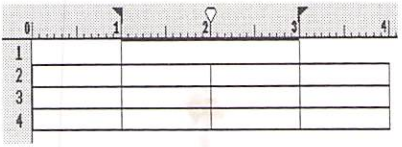
border of the third and the last columns. The right hand edge of the first row should now be at the borders of columns three and four:



- Click into what is now the left hand cell (ie. the one which was the second cell) of the top row using the left mouse button.
- Click into the second cell of the row using the right mouse button. The two cells now in the row should be highlighted:



- Bring up the main menu, and enter the ruler submenu as before. This time, click on the "Join Columns"option, and the two columns will become one.
- Drag the tab marker on the top ruler into the centre of this new, wide column to make text in it centred.



- Place the cursor in the second row. The ruler display should change correspondingly.
- Now drag the tabs in the second, third, and fourth columns into the centres of those columns to make them centred. For each column, press the left mouse button over the current tab marker, and drag the marker to near the centre of each column, then release the mouse button.
- Now move the mouse pointer over the border of the first and second columns in the main part of the table. It will change to a double arrow shape.
- Press and hold the left hand mouse button whilst the pointer is a double arrow shape, and move right until the flashing drag box shows the dragged edge to be over the 1.5 inch position.
- Place the cursor in the third or fourth row of the table.
- Drag decimal tabs into the centres of columns 2 to 4 (ie. over the

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